MEDICAL RECORD

"IF there is any possible means of increasing the common wisdom and ability of mankind, it must be sought in medicine."

—Descartes

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SEP 20 1947

February 1946

Vol. 159, No. 2

Vitules

REG. U. S. PAT. OFF.

IMPROVED FORMULA

VITAMIN CAPSULES

WITH CAROTENE

A FORMULA BASED ON

The Modern "Yardstick" of Nutrition

RECOMMENDED DIETARY ALLOWANCES
NATIONAL RESEARCH COUNCIL

These standards are considerably higher than those believed to represent the minimum daily requirement.

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Vitules—*The Only Multivitamin Capsule Containing Carotene (Provitamin A).*

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VITAMINS	RECOMMENDED	VITULES
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Ascorbic Acid	75 mg.	75 mg.
Thiamine	1.8 mg.	2.0 mg.
Riboflavin	2.7 mg.	3.0 mg.
Niacin	18 mg.	20 mg.
Pyridoxine (vitamin B_6)	—	0.2 mg.
Calcium Pantothenate	—	20 mg.

*1000 units from carotene; 4000 units from fish liver oils.

Wyeth
REG. U. S. PAT. OFF.

WYETH INCORPORATED • PHILADELPHIA 3 • PENNSYLVANIA

For the symptomatic relief of sinusitis...

"The benzedrine inhaler is an excellent vasoconstrictor and unless overindulged in, it may be used conveniently for long periods without deleterious results." Moore, J. H.: A Resume of Conservative Sinus Management, Southern Med. J. 34: 848-854

The vasoconstrictive vapor of Benzedrine Inhaler, N.N.R., diffuses evenly throughout the upper respiratory tract, opening sinal ostia and ducts which are frequently inaccessible to liquid vasoconstrictors. The sinuses drain. Headache, pressure pain, "stuffiness" and other unpleasant sinusitis symptoms are relieved. Each Benzedrine Inhaler is packed with racemic amphetamine, S.K.F., 200 mg.; menthol, 10 mg.; and aromatics. Smith, Kline & French Laboratories, Phila., Pa.

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...a better means of nasal medication

HISTAMINE THERAPY The therapeutic efficacy of histamine in rheumatoid, arthritic and neuralgic affections has been repeatedly confirmed by clinical studies. Imadyl Unction 'Roche' combines the potent vasodilating effect of histamine with the dependable analgesic action of salicylates. Its application — by simple massage — stimulates sluggish local circulation, brings a pleasant sensation of warmth to the affected area, and markedly relieves pain and discomfort. This singular effectiveness of Imadyl Unction makes it a particularly valuable remedy for the relief of rheumatoid, arthritic and neuralgic aches and pains. Supplied in 1½-oz. tubes and 1-lb jars.

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MEDICAL RECORD

FORMERLY KNOWN AS THE MEDICAL JOURNAL AND RECORD

PUBLISHED MONTHLY BY

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FEBRUARY 1946

OPEN FORUM 70

EDITORIALS 105

PAPERS AND ADDRESSES

Present Status of Electric Sleep Treatments
William Karliner, M.D., New York, N.Y. 87

Heart Failure: Diagnosis, Prognosis and Treatment
Meyer Sclar, M.D., Brooklyn, N.Y. 89

A New Conception of Diaphragmatic Hernia *(Conclusion)*
William Lintz, M.D., Brooklyn, N.Y. 93

The Radical Operation for Carcinoma of the Rectosigmoid
Abraham O. Wilensky, M.D., New York, N.Y. 95

The Value of Radium in Various Diseases
Max Einhorn, M.D., New York, N.Y. 98

The Treatment of Tinnitus Aurium, Dizziness and Deafness
John C. Rommel, M.D., Philadelphia, Pa. 100

Psychology of Friendship and Acquaintanceship
Edmund Bergler, M.D., New York, N.Y. 101

SPECIAL ARTICLES

Scientifically Organized Medical Service
T. Swann Harding, Falls Church, Va. 70

Use of "M.D." Barred in Advertisement of Powder
John Simpson, New York, N.Y. 72

Some Random Thoughts
William Moser, M.D., Brooklyn, N.Y. 74

Letters From a Physician to His Pre-Medical Student Son *(Continued)*
A. Chester Field, M.D., New York, N.Y. 84

NEWS ITEMS 107

BOOK REVIEWS 109

CRITIQUE 111

MEDICOLEGAL NOTES 112

VOL. 159, NO. 2
WHOLE NO. 2757

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A NEW HYGIENIC APPROACH

with Trushay

Before examining and treating patients, every member of the profession wants his hands to be as hygienically clean as a good scrubbing with soap and water can make them.

But when you wash your hands and then use a hand lotion to prevent drying or chapping, some of the hygienic value of soap and water cleansing undoubtedly is lost.

TRUSHAY was specially formulated to be smoothed on BEFORE washing the hands, and thus serves a double purpose.

FIRST—TRUSHAY helps prevent depletion of the skin's natural lubricant... aids in keeping the dermal tissue normal and unbroken.

SECOND—used before washing, TRUSHAY enables you to examine and treat patients with hands that are not only soft and smooth but hygienically clean.

Try TRUSHAY today. A bottle lasts a surprisingly long time.

TRUSHAY

THE "BEFOREHAND" LOTION

A Product of BRISTOL-MYERS COMPANY
19NH West 50th Street, New York 20, N. Y.

Psychological Reactions of Soldiers

A. J. M. Sinclair, of the Australian Army Medical Corps, delivered in 1944, at the University of Melbourne, two lectures on the Psychological Reactions of Soldiers (*Med. Jour. Australia*, August 25 and September 1, 1945). In the first of these lectures, Dr. Sinclair discussed the various factors, intrinsic and extrinsic, which operate in the determination, in a given individual, of his particular type of reaction to the stress of battle. The intrinsic factors, he said, depended upon the neurological make up and psychological constitution of the individual, and the extrinsic factors included such variables as the effectiveness of the soldier's weapons, the spirit and momentum of the men about him, and the elements of the strain imposed upon him. The second lecture described the psychological state which existed in the various theaters of warfare and the types of nervous disorders among service men. The anxiety states headed the list of common types of neuroses by a long way, and it was found that there was no essential difference between anxiety states of war and those of peace, but that the socalled somatic equivalents of anxiety states were much commoner in war neuroses. Important points brought out by the author in these lectures are:

War service imposes upon the individual the necessity to adjust himself psychologically to a new social structure. He is obliged to reorientate himself to different cultural, ethical, moral and other social standards, and in this task he falls or stands by the particular personality type which he possessed prior to enlistment. His mental equipment and his previous life are important in this respect. Battle stress, if sufficiently severe, may precipitate breakdown even in men of good personality, and the feelings of frustration or disillusionment in men who return to base areas after conflict are pointed out, which may often result in loss of group morale and a tendency to lay stress on personal concerns.

The incidence of psychosis in the army was found not to be greatly in excess of that which obtains in civilian life for the same age group. Among the hysterical manifestations seen, disturbances of consciousness were the most common, and it was found that schizophrenia or a schizophrenia-like state was by far the commonest psychotic manifestation in war time. The author believes that the battle situation plays little part in causing schizophrenia, though it may uncover a psychosis which has been developing for some time.

The question of treatment was dealt with in a general way, two points being stressed: first, the absolute necessity for early treatment near the front line, and secondly, the proved value of psychotherapy as the most important form of treatment, in spite of many advances in physical methods of treatment.

Finally, the question of postwar rehabilitation was stressed as the necessary complement to any treatment of war neurosis. The author pointed out that he had no illusions as to the difficulties involved in this immense task, nor as to the unsatisfactory way in which we had coped with the problem so far.

Thantis Season

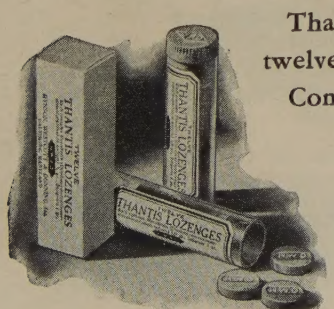
WINTER-TIME is the season of throat affections.

Thantis Lozenges are especially effective in relieving these conditions, because they are anesthetic and antiseptic for the mucous membranes of the throat and mouth. The active ingredients dissolve slowly in the mouth, providing continuous soothing medication of the area.

Thantis Lozenges contain Merodicein (H. W. & D. Brand of Diiodooxymercuriresorcinsulfonphthalein-sodium), 1/8 grain, and Saligenin (Orthohydroxybenzyl-alcohol, H. W. & D.), 1 grain. They are effective, convenient and economical.

Thantis Lozenges are supplied in vials of twelve lozenges.

Complete literature on request.



ARMY (E) NAVY

HYNSON, WESTCOTT & DUNNING, INC.
Baltimore 1, Maryland

Open Forum

Scientifically Organized Medical Service

T. SWANN HARDING
Falls Church, Va.

During the war, we could not turn the health of those in our armed forces over to competitive private practice. We could not let them shop around under fire for diagnoses. We could not even give them free choice of physicians and the intimate personal relationship between doctor and patient.

With the end of the war the perennial problem of adequate medical care for all people here at home might be answered finally, if we would apply the results of experience tried in fire. For, during the war, a large percentage of our physicians had been engaged in full-time State medicine. We depended absolutely upon State-salaried doctors for the life and health of our men and women in the armed forces.

We have seen that State-salaried group medical practice works admirably under difficult circumstances. It has also been shown that such group activity can operate successfully under the most harrowing conditions, and in lack too of much of the equipment and many drugs ordinarily considered necessary in civilian medicine. We know that, under emergency conditions, when it is most severely tested, group medical practice proves successful.

Meanwhile, members of the wartime community, civilians at home, had to get along with even less than the inadequate medical care they normally had. That could not be helped. It was also right that the best care, State-salaried group medical practice, should be reserved for the most important group in our wartime society, the armed forces. Nevertheless the Permanente Foundation did demonstrate that good overall care could be provided most economically for a large group of physically nonselected workers in Kaiser's shipyards.

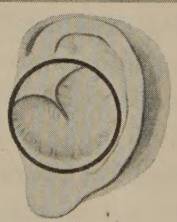
The provision of adequate medical care for all could perhaps be made if a few basic principles were repeated. This would, of course, require the scientific organization of the practice of medicine, which is a more difficult job, given the present set-up, than if we could start from scratch. For doctors have become accustomed to competitive medical practice.

It was natural that our present overlapping system of medical care sprang up unplanned. There is no reason to discredit those who fashioned this system. Today we can, if we wish, distribute medical care as scientifically as medical research is pursued, at least in the best laboratories. For not even medical research is what it could be if better organized.

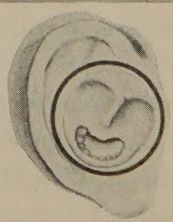
This does not mean that we must set up State medicine. It does mean that we should set up a prepaid system of group medical care. It does mean that we should socialize medicine, in the pure dictionary sense of making it efficiently and widely applicable to our entire society. It does mean that we should establish a scientifically organized functional system.

Medications of Choice
FOR THE SPECIFIC INVOLVEMENT

Auralgan
in ACUTE OTITIS MEDIA



SYMPTOMS: Pain, Fever, edema, leucocytosis, sense of fullness and impaired hearing. TREATMENT: Relief of pain and inflammation—Auralgan. ACTION: Decongestant, analgesic, bacteriostatic.



Otosmosan
in CHRONIC SUPPURATIVE OTITIS MEDIA

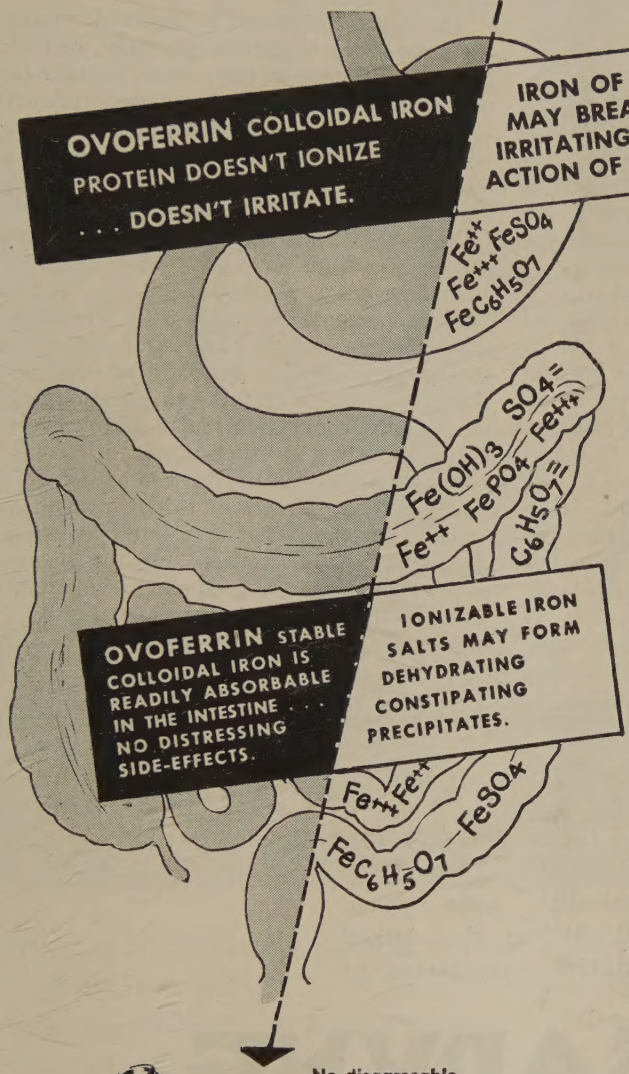
SYMPTOMS: Persistent discharge, often foul smelling, usually no toxemia, no pain, no fever. TREATMENT: Otosmosan. FORMULA: Sulfathiazole 10%—Urea 10%—Benzocaine 1%—In Glycerol (Doho). ACTION: Deodorizes the discharge, liquifies unhealthy granulations, bacteriostatic, permits normal epithelialization.

Complimentary quantities for clinical trial

Scientific data and reprints of clinical studies reporting upon the use of Otosmosan available on request.

THE DOHO CHEMICAL CORPORATION
New York 13, N. Y. • Montreal • London

COLLOIDAL IRON vs Ionizable Iron



In hypochromic anemia when iron therapy is indicated Ovoferrin provides colloidal, assimilable iron protein that is readily absorbed without distressing side-effects for the patient.

No dehydration, no constipation, no irritation from ionizable salt precipitates because *Ovoferrin doesn't ionize.* Ovoferrin iron enters the gastro-intestinal tract as a fully hydrated oxide in colloid state . . . readily absorbable . . . promptly assimilated.

Today especially physicians find Ovoferrin effective in combating nutritional anemias of infants, children and adults. In chlorosis, in debility states, in anemia following blood loss, after gastro-intestinal surgery and in anemia frequently associated with pregnancy and lactation.

Pleasant to take. Ovoferrin has no disagreeable taste or odor to upset the patient. Doesn't stain the teeth.

Ovoferrin is available at drugstores in 11 oz. bottles. Dosage: One tablespoonful in water at mealtime and at bedtime.

No disagreeable taste. Does not stain teeth.

OVOFERRIN COLLOIDAL ASSIMILABLE IRON

MADE BY A. C. BARNES CO., NEW BRUNSWICK, N. J.

"Ovoferrin" is a registered trademark, the property of A. C. Barnes Co.

This should, first of all, be based on a policy of prepayment. We now expend from two to two and a half billion dollars annually for peacetime medical care. In a scientifically organized system complete medical, surgical, and hospital coverage could be provide for all at a rate of from $15 to $20 per person per year. The total cost would be no more than we now expend for partial and inadequate care only for selected classes of our society.

Granite Gables

Use of "M.D." Barred in Advertisement of Powder

The Ninth Circuit Court of Appeals, in cease and desist proceedings for violation of the Federal Trade Commission Act, held that the evidence sustained the Commission's findings that the use of the letters "M.D." either alone or with the picturization of a doctor, nurse or cross, in connection with a medicated douche powder, was deceptive in leading the public to believe that the powder was endorsed by the medical profession or by the Red Cross, and that the Commission's cease and desist order was therefore justified. (Stanley Laboratories Inc. vs. Federal Trade Commission, 138 F. 2d 388).

The order was issued by the Federal Trade Commission pursuant to a complaint charging the petitioners for the review of the order with engaging in unfair and deceptive acts and practices in commerce, in violation of the Federal Trade Commission Act, 15 U.S.C.A. Sec. 41 et seg. The allegation of the complaint was that, in the use in the sale and transportation of the douche in interstate commerce, the petitioners, by the use of the letters "M.D." in designating their products, made "false, deceptive and misleading representations to the effect that their products are either prescribed or compounded by physicians, or that they bear the endorsement and recommendation of the medical profession."

The court considered as significant facts leading to the issue of the Commission's order, several admissions by the petitioners in their brief, including one that by the use of the term "Laboratories" in their corporate and trade name, they represented that they owned a laboratory equipped for the compounding of medicinal preparations and for research in connection therewith, whereas in fact, they neither owned or controlled any such laboratory. Among other admissions, in the record but not in the brief, was that the use of such descriptive words and phrases as "dependable", "insure personal hygiene", "dependable safeguard" and "effective, reliable, antiseptic powder" in referring to the douche had a tendency to lead the purchasing public to believe that the preparation was a preventive against conception and a germicide, whereas, the preparation was not such a preventive and was not an adequate prophylactic. The use of the initials "M.D." however, was the core of this controversy.

The court held that the advertisement justified the misgivings of the counsel for the petitioners themselves that they were in apparent violation of the statute. Discussing the testimony of the five Commission physicians who testified, the court pointed out that

IN REFLEX PHENOMENA

particularly with women and children, the marked sedative properties of

PASADYNE

give it a prominent place among the agents used in the control of these manifestations.

No depression follows its use.

JOHN B. DANIEL, INC. ATLANTA, GEORGIA

The Margin of Safety
The Landing Signal Officer, standing at the end of the flight deck, doubles for the pilot of each incoming plane, supplements his skill and judgment, provides the *additional* margin of safety that makes landings surer . . . saves lives.

EFFECTIVE in combating cases of unusual vitamin deficiency, the seven vitamins contained in VI-TEENS vitamin tablets each performs a specific task. But it is the SUPER POTENCY of VI-TEENS that supplies the additional margin of safety beyond minimum adult needs. Two Super Potency Vi-teens Tablets daily supply the following amounts:

Vitamin B_1 (Thiamin HCL) (2666 U.S.P. Units)	8 Milligrams
Vitamin B_2 (G) (Riboflavin)	4 Milligrams
Niacinamide (Nicotinamide)	30 Milligrams
Pyridoxine (B_6)	2 Milligrams
Vitamin C (1500 U.S.P. Units)	75 Milligrams
Vitamin A	5000 U.S.P. Units
Vitamin D	1000 U.S.P. Units

Vi-teens Super Potency vitamin tablets are especially recommended in cases of avitaminosis where an unusually high dosage of additional multiple vitamin intake, particularly with reference to thiamin, riboflavin, and pyridoxine, is indicated. Regular size package on request.

LANTEEN MEDICAL LABORATORIES, Inc. . . . CHICAGO 10

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one, a urologist, testified that the initials "'M.D." following even the word "Baltimore" in capitals might under some circumstances lead him to think that "Baltimore" was a doctor, if that combination appeared on a package of medicine.

In discussing the testimony of lay witnesses before the Commission, the court held that it was proper, in examining each lay witness, to show him specimens of the petitioners' advertising and ask what came to his mind when he examined them, and why, since the issue to be determined was whether or not the letters "M.D." were misleading to the public.

To the petitioners' complaint that the lay witnesses on cross examination stated merely that the letters "M.D." gave the "impression" that doctors approved of the powder, the court said that, "impressions" are the primary targets of the ad-writers and quoted from 125 F. 2d 679,681, to the effect that: "The law is not made for experts, but to protect the public—that vast multitude which includes the ignorant, the unthinking and the credulous, who, in making purchases, do not stop to analyze, but too often are governed by appearances and general impressions."

Pointing out that "each case is to be judged by its own facts," the court agreed with the Commission that the use here of the letters "M.D." was deceptive, and also held that even if it did not so agree, it would be compelled to affirm the order, since it was supported by substantial evidence.

—John Simpson
New York, N.Y.

Some Random Thoughts

To the Editor.—

I was recently asked by a layman whether I believed that Charles A. Lindbergh and the late Dr. Alexis Carrel, in their interesting experiments in biology, really created a human heart. I reminded him that in the first world war Joyce Kilmer wrote a beautiful poem in which he stated that "only God could make a tree". I hope I am not guilty of plagiarism when I state that only God can make a human heart.

The biologist sometimes studies tissues and cells outside the body. When we consider the motion of the different cells of the human body, we soon realize that each cell has a characteristic movement of its own according to its structure and function in the human body. Physical and chemical factors are at play in this motion, but do not make the erroneous deduction that you have discovered the origin of this motion. The nucleus of the human cell is complex and constitutes the very essence of life. Although aware of the great and rapid progress being made in every department of activity, I believe that science has its limitations.

The atom and nuclear atomic energy have been studied in their various phases since the days of Dalton, Avogadro, Mendeleff and Meyer, J. J. Thomson, Rutherford, Bohr, Chadwick, Aston, Einstein, Compton, Stoney, Milliken, Oppenheimer, Ureyo, etc. That the atom or atomic energy has great destructive power has been clearly demonstrated. Its benefits to mankind are yet to be demonstrated.

Precision is as important in analgesics as in billiards. PRO-DOL, widely used as a general analgesic, is especially preferred for patients who cannot tolerate plain aspirin, such as cases with gastric hyperacidity or ulcers.

Each full dose incorporates acetylsalicylic acid, 5 gr., with dried aluminum hydroxide gel, 7½ gr. Irritant acids, split off from ordinary aspirin in the stomach, are buffered *as they form*. A unique process insulates salicylate from gel within each tablet until used, preventing decomposition.

DOSAGE: 1 or 2 tablets, repeated as required.
Boxes of 24 and 60 flavored tablets.

Write Today for a Trial Supply

Pro-Dol
REG. U. S. PAT. OFF.
THE BUFFERED ANALGESIC

THE PRODOL COMPANY
50 EAST 42nd STREET • NEW YORK 17, N. Y.

Master Builders of ENDOCRINOLOGY

GEORGE REDMAYNE MURRAY
1865-1939

George Redmayne Murray first recorded the progress of a myxedematous patient who had been treated with a glycerin extract of sheep's thyroid gland. Glandular therapy owes much to this master builder whose keen perception, courage and imagination have helped make it possible for many to lead longer and more fruitful lives.

To dedicate our efforts to the advancement of medical science . . . to contribute in increasing measure to the practical application of knowledge in the service of mankind . . . that is the aim of Harrower research.

Special skills and knowledge, acquired during more than a quarter-century of application to the production of endocrines and pharmaceuticals of distinction, confer a continuing and growing obligation to develop products worthy of the finest traditions of medicine and related sciences.

THE HARROWER LABORATORY At Your Service GLENDALE CALIFORNIA

The HARROWER LABORATORY, *Inc.*
GLENDALE 5, CALIFORNIA
NEW YORK 1 DALLAS 1 CHICAGO 1

Do you believe that the law of mutations, according to which that of the millions of persons on this planet, past and present, no two are alike, was conceived by the atom?

Some enthusiasts believe that the baser metals can be converted by their energy into gold, and that hatred, jealousy, revenge, in short, man's inhumanity to man, will be replaced by love and kindness.

We are not entirely unaware of the great destructive forces of nature, such as the volcanic action in the Strait of Sunder in 1883 which destroyed two-thirds of Krakatoa. At the present time, when thousands of people are being killed in accidents and die from disease, is it really a step forward in the interest of humanity to discover new methods of destruction? It is certainly much more cheerful to see the beautiful cardinal of Virginia or the magnificent quetzal of Guatemala.

It is true that some investigators, in their enthusiasm to aid humanity, experiment with monkey glands or even make efforts to resuscitate the dead. Even an experienced physician can be deceived by an apparent death. It has happened more than once that a person has been declared dead after prolonged and faithful efforts to revive him, and that further effort has been successful. It is important to remember this. The detonations were heard for three thousand miles.

It was the splendid achievement of Theodore Roosevelt to promote peace in the Russo-Japanese War. This great patriot clearly states his high regard for the Japanese in his autobiography. In reading this my mind reverts to the researches of Kitasato, Noguchi and other Japanese names in medical history. I do admit, however, that the prerogative to change one's mind is not the exclusive property of the gentler sex.

In the gay nineties, Max Nordau wrote a book on *Degeneration,* and since then some deplorable and chaotic years have passed. Will a supplement be published, on the cover of which, in gilt letters will appear *Regeneration,* or am I seeing a mirage on the horizon? I wonder!

William Moser, M.D.
Brooklyn, N.Y.

Symposium on National Health

A national symposium on the state of the nation's health, under the title of "Medicine's Tomorrow," was held in New York on January 22nd, under the sponsorship of the Council of New York University and the faculty of the University College of Medicine. The present condition of the nation's health, what should be done about it, and the challenge offered to medical colleges were discussed. Dr. A. Newton Richards, vice-president of the University of Pennsylvania in charge of medical affairs, delivered an address on "The impact of the war on medicine." Dr. Dean A. Clark, medical director of the Health Insurance Plan of Greater New York, spoke on "Health—the people's business." Dr. Alan Gregg, director of the medical sciences of the Rockefeller Foundation, discussed "The mission of a medical school." Among those who participated in the discussions were leaders in education, medicine, finance, industry, business, labor, hospital management, and in national and civic affairs.

Peacock's
BROMIDES
Antispasmodic
Sedative Somnifacient
for Oral Administration
This palatable combination of alkali and alkaline earth bromides provides a prompt, pleasant and rather long lasting sedation.
In ordinary doses Peacock's Bromides tends to depress an abnormal irritability of the nervous system, and to eliminate worry, anxiety, nervousness and excitement due to mental or physical strain, to neurasthenia and to hysteria.
Each fluid dram is standardized to contain 15 grains.
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OD PEACOCK SULTAN COMPANY
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FOR EXTRA CONFIDENCE...

Over the years the name HEYDEN has signified consistently dependable therapeutic chemicals.

The supplementary statement "Manufactured by Heyden Chemical Corporation" on your pharmaceutical manufacturer's label is your extra assurance of dependability.

Heyden produces Penicillin Calcium and Penicillin Sodium for parenteral administration, as well as for use in the manufacture of other pharmaceutical forms.

FINE HEYDEN CHEMICALS

HEYDEN *Chemical Corporation*

393 SEVENTH AVENUE, NEW YORK 1, N. Y.

Chicago Sales Office: 180 N. Wacker Drive, Chicago 6, Ill.

Benzaldehyde • Benzoates • Benzoic Acid • Benzyl Chloride • Bromides • Chlorinated Aromatics • Medicinal Creosotes • Formates • Formaldehyde • Formic Acid • Glycerophosphates • Medicinal Guaiacols • Hexamethylenetetramine • Paraformaldehyde • Parahydroxybenzoates • Penicillin • Pentaerythritols • Salicylates

Therapeutic Action of PERTUSSIN for Coughs in

- **Acute and Chronic Bronchitis**
- **Paroxysms of Bronchial Asthma**
- **Dry Catarrhal Coughs**
- **Whooping Cough**
- **Smoker's Cough**

What Pertussin Is: The single therapeutic element in Pertussin is an extract of thyme (Process Taeschner) which is quickly absorbed and carried to the secretomotor center. It is highly beneficial in easing cough paroxysms not due to organic disease.

What It Does: 1. Pertussin stimulates secretion of the tracheobronchial glands to relieve dryness. 2. It facilitates removal of mucus accumulation. 3. It improves ciliary action. 4. It exerts sedative effect on the irritated mucous membrane.

Pertussin is pleasant tasting and entirely free from opiates, chloroform or creosote. You may indicate it as often as needed.

PERTUSSIN

For Children, Adults and the Aged

SEECK & KADE, INC. NEW YORK 13, N. Y.

Boric Acid

To the Editor.—

Your editorial (MEDICAL RECORD, November 1945, page 677), entitled "Boric Acid Should Go", states in the last paragraph, first column, that "we have simpler, less dangerous and more effective germicides". What are they? I have read this article in several journals but in no case did they mention what the germicides were. It looks as though the RECORD was lending itself to the propaganda of certain cliques. I have used boric acid for forty years with every evidence of success and no sign of toxic effects.

An old timer,

E. L.

* * *

To the Editor.—

I have read your effort to destroy boric acid as a factor in medical practice. You seem to forget entirely that most medicinal agents are poisonous when improperly used. You forget also that boric acid solutions, and even the undiluted powder itself, are safer than hundreds of socalled remedies that clutter up the mails and the journal "ads" that come to us almost daily.

P. A. Spain, M.D.
Paris, Texas

Grants for Cardiovascular Research

Grants totalling $126,000 to be used for research into the causes of cardiovascular diseases have been made to the medical schools of six universities by the Life Insurance Medical Research Fund, according to a recent announcement. The recipients of these grants, the first to be made by the Fund since its organization by 147 life insurance companies last fall, are as follows:

Columbia University: Dr. Joseph Victor, of the Department of Pathology; and Dr. Dickinson W. Richards, Jr., Department of Medicine.

University of Minnesota: Dr. Maurice Visscher, Department of Physiology; and Dr. Arthur Kirschbaum, Department of Anatomy.

University of Pennsylvania: Dr. H. C. Bazett, Department of Physiology.

Southwestern Medical College, Dallas, Texas: Dr. Gladys Fashena, Department of Pediatrics.

Washington University, St. Louis: Dr. John R. Smith, Department of Internal Medicine.

Yale University: Dr. John R. Paul, Section of Preventive Medicine.

Altogether the Fund will have available over $500,000 during the next year, to be expended to assist existing research projects in the field of heart and arterial diseases and for support of younger Research Fellows who without that support would be lost to the medical research field. Taken together, these cardiovascular diseases constitute the principal cause of death in America.

This is the largest amount to be devoted in any one year to research in this field, with a total of $3,500,000 in prospect over a six year period. The grants made by the Fund were recommended by the Medical Advisory Committee, headed by Dr. Francis G. Blake, dean of Yale University Medical School, and approved by the board of directors.

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Dr. Justin L. Powers, chairman of the Committee on National Formulary of the American Pharmaceutical Association, Washington, in a paper presented at the semiannual meeting of the Scientific Section of The Proprietary Association of America, held in New York on December 5, 1945, said that the existence of two official books of drug standards in the United States—the *U.S. Pharmacopœia* and the *National Formulary*—was confusing to many persons. The *United States Pharmacopœia,* said Dr. Powers, from the beginning had restricted its scope to drugs selected by the medical members of the Revision Committee and believed by them to possess great therapeutic merit. This selectivity, he said, had prevented it from recognizing a large number of drugs which, judging by the extent of actual use by the medical and pharmaceutical professions, must possess some merit. Briefly, admissions to the *Pharmacopœia* were on the basis of therapeutic merit while admissions to the *National Formulary* were on the basis of extent of use.

The first edition of the *National Formulary* appeared in 1888. Official recognition and endorsement came when the Federal Food and Drug Act of 1906 adopted the *National Formulary* and the *U.S. Pharmacopœia* as legal stndards. Increased responsibility brought an ever increasing amount of attention to the careful preparation of the *Formulary,* and during the past several years its revision has been on a continuous basis with the efforts of full time employees directed solely to this work.

Rockefeller Institute Receives Award

The Seventh Annual Scientific Award of the American Pharmaceutical Manufacturers' Association was presented to the Rockefeller Institute for Medical Research in a ceremony that took place in New York on December 10th. The award was in recognition of the Institute's "great contributions to public health by fundamental research in the field of the medical sciences, which is of profound and lasting value to mankind." Dr. Alan Valentine, president of the University of Rochester, made the presentation address and the award was accepted for the Institute by Dr. Homer F. Swift, acting director of the hospital.

Speakers who participated in the award ceremony included: Dr. John G. Gibson II, instructor in medicine, Harvard Medical School, and research associate, Massachusetts Institute of Technology, who spoke on "Progress in blood transfusion therapy;" Dr. James A. Shannon, associate professor of medicine, New York University College of Medicine, who spoke on "Progress in antimalaria therapy;" Dr. Selman A. Waksman, professor of microbiology, Rutgers University, who spoke on "Antibiotic substances—contribution of the microbiologist;" Dr. George Cowgill, professor of nutrition, Yale University, who spoke on "Progress in vitamin therapy;" Dr. Sidney C. Madden, professor of pathology, Emory Medical School, who spoke on "Progress in amino acid therapy;" and Dr. George W. Thorn, Hersey professor of theory and practice of physic, Harvard Medical School, who spoke on "Progress in hormone therapy."

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Problems of Rural Health Services

The Interbureau Committee on Postwar Programs of the United States Department of Agriculture has issued an interesting pamphlet entitled "Better Health for Rural America", which outlines plans of action for farm communities. This discussion of the main problems of rural health services and what can be done about them was prepared by a working group under the direction of Dr. F. D. Mott, of the U.S. Public Health Service, who is the national activity leader in rural health and sanitation of the Committee.

Certain facts about rural health and medical care are presented and the topics discussed include such problems as the burden of illness and death, too few doctors and dentists and other health workers, the lack of hospitals and other facilities; poor sanitation, programs for public health and public welfare, health services received, reasons for inadequate rural health services, psychological difficulties, and economic problems. A summary is presented of what had been done about these problems by public health and welfare services, the Department of Agriculture's health programs, the U.S. Department of Agriculture experience and other efforts to improve the rural health services. In discussing what has to be done now, five objectives are given, as follows: Easing the payment of the medical bill, constructing the needed health facilities, getting more doctors, dentists, and nurses for the rural areas, extending preventive health services and health education, improving the quality of rural medical services, and health security for farmers. This booklet contains materials of value to all who are interested in providing more adequate medical care for rural communities.

Regional Conference on Social Hygiene.—At the annual meeting of the American Social Hygiene Association, held in New York on Wednesday February 6th, the program included a regional conference on social hygiene. At the morning session, Dr. George Baehr, president of the New York Academy of Medicine, presided and the subject discussed was "What the war has taught, of use to the future social hygiene program", and the speakers were Watson B. Miller, administrator of the Federal Security Agency; Dr. Margaret D. Craighill, dean of the Women's Medical College of Pennsylvania; and Dr. Warren F. Draper, assistant surgeon general, U.S. Public Health Service. At the luncheon session, Dr. Philip R. Mather presided and the topic for discussion was "World view of social hygiene today". Addresses were delivered by Dr. John H. Stokes, director of the Institute for Control of Syphilis, University of Pennsylvania; and Dr. J. Cavaillon, secretary general of the French Ministry of Health. At this session, the William Freeman Snow Medal and honorary life memberships were presented. The afternoon session was devoted to an open discussion on the "Future of social hygiene in the United States" with Dr. Ira Hiscock, Yale University School of Medicine, presiding. The speakers included Dr. Ernest L. Stebbins, Commissioner of Health of New York City; Eliot Ness, former commissioner of public safety, Cleveland; Clarence E. Partch, Rutgers University; and Lieut. Howard Ennes, U. S. Navy. Outstanding educational films were shown after the general session.

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LETTERS FROM A PHYSICIAN TO HIS PRE-MEDICAL STUDENT SON

A. CHESTER FIELD, M.D.
New York, N.Y.

(*Continued from page 22*)

There is danger in overdoing the thing, of course, especially if the lower grades of fiction, such as Deadwood Dick, Nick Carter and Jesse James, find their way into his hands. He will then emulate not the best but the worst in slang and curse words, and will probably go out and hold up a neighbor for an apple or a copper; but Heaven help him and his victim if he gets hold of an actual "shooting iron". He will move about as if dazed. His nights will be sleepless or at least disturbed by frightful dreams and there will be no such thing as arithmetic or grammar or geography in his scheme of life. That will ruin his school standing, bring swift discouragement and hasten his desire to give up school altogether and "go to work" which, if he does it, he will probaby regret all the future days of his adult years.

The prescribed reading for entrance to college in my day was Bacon's *Essays,* Johnson's *Rasselas,* and Burke's *Speech on Conciliation with America.* I do not know what the present requirements are, but it has always seemed to me that the college professors who picked out those eminent and worthy works did not know very well the mind of the boy. Why would it not be better to give them Jules Verne's *Twenty Thousand Leagues Under the Sea* or *Around the World in Eighty Days,* or Alexander Dumas' *Three Musketeers,* —all of these in good translation, of course. The gripping fascinating story in each would make syntax and rhetoric more like play instead of the hard dry grind it becomes for most boys because they "don't see any sense in it". Why? Because the analytical powers of the mind are not yet developed sufficiently to take delight in pointing out differences and distinctions. Most grown-ups seem to forget that the mind must grow with the body and that it would be just as reasonable to ask a boy of ten years to lift a hogshead of molasses as to analyze one of Shakespeare's plays; for after all the mind must lift a weight as well as the body and there are plenty of tasks for which it is not yet ready and can be prepared to perform them only after years have passed.

In this twentieth century there seems to be greater insight into child psychology, although I am convinced that many who use this word could not define reaction time or the law of cerebrospinal coordination. Pedagogy is now a distinct science and is nothing other than the application of common sense psychology to the principles of imparting knowledge. There is, nevertheless, too much juggling with curricula and too much doubt about "electives". In England they worked out a system based on the experience of years to which teachers adhere with more or less uniformity in all schools, and while the result may seem like "Fordizing" the mind it is in reality not so, for it is impossible to standardize the mind, since we are not working with materials as such, but with human stuff which is affected by its own peculiarities and quickly absorbs or rejects such pabulum as it receives according to its needs.

Once in college there is not much difficulty about the *kind* of reading, as it is quite carefully prescribed in course, and there is too, a large amount of "collateral" reading which is catholic and general enough to round out the taste to completeness. There will be, for example, a course on British poets and another on British prose writers of the nineteenth century. Then there will be a study of the authors of Goldsmith's day, and still other courses dealing with Chaucer, Beaumont and Fletcher and other early writers with Shakespeare as an inevitable "seminar" course. In other days the debating societies made a large amount of reading imperative in association with current problems in government and politics, and this kind of work was of great importance in rounding out the life of the undergraduate in its scholastic aspect. There is less of debate now and more of other subjects such as military training, but one cannot be sure that the changes are altogether wise simply because they are changes.

It is not necessary that the future student of medicine read nothing but biological and associated science books during his academic undergraduate training. In fact it is desirable that he read only such books as are of use in his courses dealing with subjects like mammalian morphology or the comparative anatomy of invertebrates, and leave the other very special subjects such as the anatomy of the cat or the osteology of the horse to those students who are thinking of specializing in zoology or kindred subjects with a vew to teaching them. This mistake is made by a large number of students in our universities who are so thoroughly imbued with the idea that to become a doctor one must know everything about such subjects as paleontology, that there is danger of finding too little or insufficient time for the purely cultural subjects which should form the background of the education of every gentleman no matter what his profession.

Another reason for not surfeiting the mind with too much science in the pre-medical years is that the mind is likely to become fatigued, or "fed-up" as the English say, with factual subjects and thus the imagination becomes inactive, shutting out such valuable exercises as poetic composition for those who may be so inclined, as well as the reading of poetry. Even the musical instinct may be dwarfed at this important period so that it can never be revived, and the mind crammed with science may be in reality utterly unfitted for taking up a medical career, which, after all, deals with people rather than with things, with "the humanities", and all the emotions, passion, fear, hate, dread of suffering, which pass before the physician's eye in a constant panoramic setting. The overtrained scientist is not, in the last analysis, the man to sit in counsel with those most in need of the sympathetic human touch in the twilight hour of approaching death, and there are many like situations in medical practice which have little or nothing to do with medicine as such.

Therefore, let your reading be along cultural as well as scientific lines. History, art, general literature of the standard type, archaeology, geology, astronomy; in all of these, new fields of thought will open themselves to you, and you will find an increasing joy in beholding yourself as a tiny unit in the great world of things as they are, a spectator watching life's play from the sidelines and soon, very soon, to enter the play as an active participant.

(*To be continued*)

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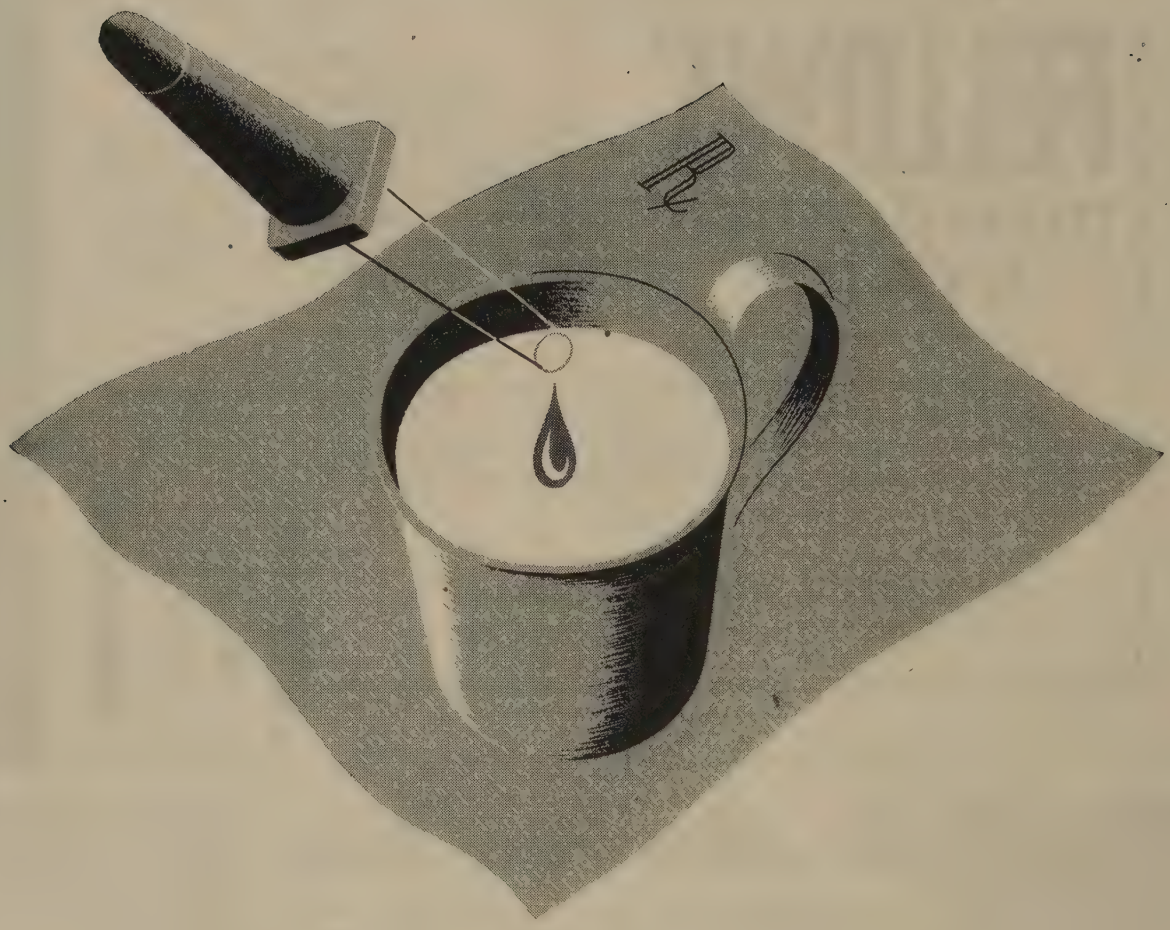

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PRESENT STATUS OF ELECTRIC SLEEP TREATMENTS

WILLIAM KARLINER, M.D.
New York, N.Y.

The effects of electric stimulation and provocation of convulsions in the treatment of mental disorders were first reported by Cerletti and Bini in 1938. Since then rapid strides have been made in this therapeutic field the world over in hospitals and in physician's offices.

The various terms "electric shock", "electric-convulsion therapy", "electric-fit therapy", and so on, are misnomers because they have often, oddly enough, a profound psychological effect on the physician who refers a patient for treatment. He is reluctant or indecisive in sanctioning this form of treatment, if not actually critical of it. A similar effect is obviously produced on the patient's immediate family and it is therefore desirable and justifiable, before the patient is taken in hand, to withhold from both physician and patient certain facts relating to the contemplated therapy. In view of the aforesaid considerations I deem it desirable and expedient to use the term "electric sleep treatment."

Any one of the standardized machines may be used. The units—some no larger than a portable radio—are connected to an ordinary house alternating current. A transformer increases or decreases the voltage. In addition to the contained alternating or shock circuit for provocation of the convulsion, the units also have a timer switch which controls the passage of current for fractions of a second. Some machines have another direct galvanic circuit for measuring the resistance of the patient's head. This, however, is omitted in newer machines owing to the slight practical value of the measurement.

Prior to induction of electric sleep the patient is requested to urinate. Restraining garments, for example, corsets with bones, belts, tight collars, etc., are removed because they impede free body movements. The patient is then placed on the treatment table with a pillow under his back to hyperextend the spine. Dental plates or bridges are removed. Contact jelly and electrodes are placed bitemporally and are held there by a rubber strap that encircles the patient's forehead and occipital region. The electrodes are then connected with the machine and the switch supplying the machine with the house current is turned on. The desired voltage and timing are selected on the panel of the machine. A mouth gag is inserted and the patient told to bite. Finally, the treatment button is pressed and the current passes through the patient's head.

The reaction of the patient is instantaneous. A grand mal reaction is a desirable response. It begins with a spasm of the flexors of the body and is followed by a tonic-clonic convulsion. When such a reaction is not noted repeated stimulations are advisable. These should follow one another at short intervals of a minute or less. On rare occasions repeated stimulations fail to induce a grand mal. With repeated petit mal reactions, the confusion and amnesia following the treatment are then much more striking.

The voltage and time required to obtain a response from the patient vary according to the patient's weight, age, willingness to take the treatment, fear or absence of anxiety, or negative attitude prior to the treatment. However, there is no absolute criterion as far as these interrelations are concerned; for example, a patient with great anxiety prior to treatment requires a higher dosage, although according to his weight and age, one would ordinarily utilize a lower voltage.

When insulin and electric treatment are combined the dosage required to stimulate a grand mal reaction is usually less, as can readily be observed by comparing the dosage for patients who received a series of electric sleep treatments prior to admission into a hospital where they were treated concurrently with insulin and electricity. The average doses required in electric sleep treatment range from 80 volts and .1 second to 140 volts and .2 second. Not infrequently higher doses may be required.

The complications which are noted during the convulsive stage of the treatment are lacerations of the lips, dislocations and fractures of the jaw, fractures of the spine, fractures of the long bones, fractures of the scapula and clavicle, dislocations of the shoulder and in not carefully selected cases, activation of chronic pulmonary tuberculosis, bleeding from a peptic ulcer, cardiac and circulatory failure, and so on. Among the common symptoms that accompany the treatments are generalized muscular pain, headaches, nausea and vomiting (especially in vegetative, unbalanced patients and in those who dined shortly before the treatment), backaches and memory defects. These symptoms are purely transitory. Roentgenographic examinations of the spine are always advisable to rule out any fracture, which, even if present, is usually not incapacitating or serious. To avoid complications, such as anxiety, a negative attitude before treatment, fractures and dislocations during treatment

and excessive restlessness and belligerency after treatment, it is advisable, preparatively, to administer sodium amytal (0.3 or 0.5). Bennett introduced curare for the prevention of fractures in convulsive treatments. The use of this drug should be restricted to hospital patients and must then be used with great care.

The patient's loss of memory is desirable because it is apparently a factor in the process of recovery. Often the defective memory is extremely annoying to the patient. It rarely persists longer than one or two months.

The complications of the convulsive stage of treatment can be lessened by proper support of the lower jaw. During the convulsion the patient is prevented from opening his mouth widely in order to avert dislocation of the jaw and to assure retention of the gag. Restraint of the patient during the convulsive stage is harmful rather than helpful in preventing the aforementioned complications because any force that interferes with, or counteracts, the muscular contractions, the tonic phase of the convulsion, or does not follow the normal jerking of the limbs in the clonic stage, may cause a dislocation or fracture. However, it is advisable in the convulsive stage to prevent extreme abduction with adequate means because it may cause dislocation or fracture.

The tonic phase of the convulsion lasts five to ten seconds, while the clonic may last from ten to twenty seconds. The latter is followed by apnea which may last from ten to fifty seconds; it is usually of short duration but on rare occasions may be prolonged and followed by severe cyanosis and alarming effects on the blood circulation. This is a dangerous complication requiring cardiac stimulation and artificial respiration. In one patient with a frightening apnea of more than one minute duration, I was able to decrease that period by injecting caffeine and coramine intramuscularly and strychnine and coramine intravenously one minute prior to the treatment.

The apnea is followed by a period of irregular respiration, sometimes with salivation, jactitations, and automatic movements such as rubbing various parts of the body, turning circularly, etc. This period may last one to three minutes. During the convulsion the patient, of course, is unconscious. Upon awakening, he or she may be bewildered, frightened, and sensitive to external stimuli. Sometimes the patient becomes belligerent and destructive. This reaction lasts for only one to three minutes. He gradually recognizes the physician and his surroundings, but is unaware that he has undergone treatment. The amnesia may be retrograde. It usually clears up in a half-hour or one hour.

The most important indications for the use of electric sleep treatment are: (*a*) Involutional melancholia; (*b*) endogenous depression; (*c*) postpartum psychoses; (*d*) manic-depressive psychoses (in manic and depressive phases); (*e*) schizophrenia; (*f*) reactive depressions in psychoneurotics.

The best results are obtained in the first spell of an endogenous depression and in postpartum psychoses. The treatment seems to accelerate the recovery process of the psychosis, but it is doubtful whether it is of value in the prevention of a relapse because this occurs in a small number of patients regardless of the number of treatments. In other instances, especially in schizophrenics, the number of requisite treatments is higher—twenty to thirty treatments for schizophrenics, followed, if necessary, by insulin shock treatment.

It appears that electric sleep treatments make the patient more amenable to the succeeding insulin variety. (To produce hypoglycemic coma ten units of insulin are usually injected, the dose being increased until a clear clinical coma ensues. The patient is brought back to consciousness by administration of glucose solution—fifty to one hundred cc. of fifty percent glucose intravenously or by mouth, five hundred to seven hundred cubic centimeters. Careful nursing supervision is exigent).

Among schizophrenics, catatonics show the best and lightning-like reaction. Paranoids also reveal a good response to electric sleep treatments. Even though the hallucinations and delusions disappear, the personality of schizophrenics, if deteriorated, frequently remains unaltered. Reactive depressions in psychoneurotics respond better than any other psychoneurotic trends. However, obsessive trends are occasionally benefited by the treatment.

Further studies are necessary before recommending psychoneurotics for electric sleep treatments, even though some results obtained are worth a trial, considering the short time involved and the economic factor. Psychoanalysis still remains the most important treatment for psychoneurotics. It is advisable to continue psychotherapy for them, after having obtained improvement of some trends, such as obsessions or depression, with electric sleep treatment.

Before beginning treatment the patient's general physical condition must be gauged. The examination must include electrocardiographic studies, roentgenography of the spine, and, if necessary, of the chest, also urine and blood examinations. Patients who suffer from cardiovascular disease, pulmonary tuberculosis, spinal deformities, active peptic ulcers, hyperthyroidism, diseases of the blood, bones, kidneys or liver, or have a febrile illness, should be excluded. Occasionally the physical and mental state of a patient comes under consideration with a view to determining whether he is a "good risk" despite some apparent contraindications to treatment. Politin and Hoch, for example, reported the electric sleep treatment of two psychiatric patients who were pregnant. No abnormalities were found in the infants during or after birth, and the postpartum course was uneventful. Myerson has treated patients with heart trouble, stating that the mental anguish caused more suffering to the patient and did more damage to the heart than the electric sleep treatment proper.

The electric sleep treatments may be given in the office or hospital two or three times a week—usually for six to eight weeks. It is advisable to treat patients in the office and to hospitalize those who cannot be treated there—elderly patients, for example, or those who do not voluntarily submit to office treatment, and those who should be hospitalized owing to their advanced morbid mental condition. Suicidal tendencies in depressed patients are not sufficient reason for admission to a hospital as long as they can be watched carefully and constantly. Treatment in the office avoids the social stigma involved in the admission to a hospital for mental patients, and facilitates the readjustment to their environment by not being removed from a hospital.

Summary

Electric sleep treatment is a safe procedure. It should be administered only by a skilled psychiatrist. It should preferably be given in the office than in a hospital. The selection of the patient must be carried out carefully, especially with a view to excluding undesirables, clinically speaking, or "poor risks."

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480 PARK AVENUE

HEART FAILURE: DIAGNOSIS, PROGNOSIS AND TREATMENT*

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This subject is of such a wide scope that it can not possibly be fully covered within the limits of this paper. However, I shall endeavor to touch upon the salient points with emphasis on treatment.

By heart failure is meant the inability of the heart to maintain an output of blood adequate to meet the requirements of the body. These requirements vary widely under different circumstances and depend chiefly on the physical activity of the individual. So long as the balance between supply and demand is maintained, all goes well, but as soon as the demand exceeds the supply, symptoms of cardiac failure make their appearance.

We should distinguish between primary failure of the heart and circulatory failure, that is, failure of the circulation which may result from hemorrhage or shock, with a corresponding decrease in the venous return to the heart, and a consequent reduction in cardiac output. In others words, heart failure is due to the heart failing in its function as a pump, and circulatory failure is due to the inadequacy or drying up of the reservoir or well.

Most writers on the subject usually employ the term "heart failure" as synonymous with congestive failure, a condition in which the venous pressure is raised and dyspnea and edema result. Sir James Mackenzie (1), however, also included angina pectoris as a symptom of heart failure. He reasoned, and justly so, that since heart failure signifies inability of the heart to maintain a circulation adequate to meet the requirements of the body, it is immaterial whether this inadequacy manifests itself by dyspnea or by pain. For the purpose of this paper, however, we shall limit ourselves to the former, that is, congestive failure.

There is still a difference of opinion as to the causative factor involved in the production of heart failure.

Best and Taylor (2) of the University of Toronto, in their book, *Physiological Basis of Medical Practice*, state that "the healthy myocardium possesses such great reserves of energy that there is little likelihood of its ever being faced with a resistance which it cannot effectively overcome—not until the myocardium itself becomes diseased, do the signs of circulatory failure make their appearance." With this view, most of us do not agree, and here are some of the reasons why.

Fishberg (3) in his book, *Heart Failure*, states that "as yet the question of why the heart fails cannot be answered in a high proportion of cases. The conception which seems most probable in the light of available evidence is that heart failure is most often the result of a change in the metabolic state of the heart muscle, analogous to what is known as fatigue in skeletal muscle, and that this altered metabolic state is characterized by decreased efficiency, i.e., diminution in the proportion of liberated energy which is converted into mechanical work".

Clawson (4) in a postmortem study of 102 cases of heart failure found the following: "Coronary sclerosis of serious degree was present in twenty-two and a half percent. Myocardial fibrosis was found in marked degree in twenty and a half percent and in slight degree in thirty percent. There is usually a close correspondence between the situation and extent of myocardial fibrosis, and the distribution and degree of coronary sclerosis. Myocardial fibrosis is usually due to coronary disease, but occasionally, rheumatic infec-

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tions may give rise to a slight degree of fibrosis. Luetic myocarditis is rare. Myocardial failure is rarely due to anatomical changes in the myocardium. Myocardial strain (hypertensive or nonhypertensive) is not a cause of myocardial fibrosis. True chronic inflammation of the myocardium is very rare. What is commonly called chronic myocarditis is usually myocardial fatigue resulting from the various conditions mentioned above. Approximately half of the cases of myocardial failure show no anatomical changes in the heart muscle. The anatomical changes in the heart muscle are seldom sufficient in themselves to cause failure and death."

Since we can conclude from the foregoing that heart failure is essentially a functional condition, it naturally follows that there is no characteristic pathology. However, one must not overlook the fact that more often than not, it is associated with some form of organic heart disease, and it develops eventually and often terminally in more than half of all individuals with organic heart disease.

Space will not permit us to go into lengthy discussion of all the conditions associated with heart failure. We shall, therefore, limit ourselves to only a few of the most important of them, and those that occur most frequently are: Chronic valvular defects, chronic hypertension, coronary artery disease, and auricular fibrillation. Less common are thyrotoxicosis, chronic pulmonary disease, congenital defects and prolonged abnormally fast heart rates.

Let us pause for a few moments on the subject of valvular defects. In the old days, before the advent of the x ray, the electrocardiogram, and other methods of determining myocardial reserve, the heart murmur was the all important index as to the presence or absence of heart disease. The reason was simple—the stethoscope was our most important instrument of diagnosis. Today the pendulum has swung a good deal to the opposite extreme; so that a great number of medical men minimize or entirely ignore the murmur, insisting that the condition of the myocardium is the most important factor in prognosis and treatment. Of course this is not so, for one invariably affects the other, and a true estimate of the cardiac reserve is to be found in striking a happy medium and evaluating both the mechanical defect and the state of the heart muscle.

Symptoms

The earliest and most important symptom of heart failure is dyspnea. This will appear long before signs of circulatory stasis have manifested themselves in the lungs, systematic circulation, or portal circulation. The patient tells us that he becomes short winded on performing some ordinary daily task—such as climbing one flight of stairs—which previously caused no respiratory embarrassment. The patient's history is by far more important and more accurate than any test thus far devised, to ascertain the condition of the myocardial reserve.

A word about dyspnea. A good many theories have been advanced as to its cause, but the most sound and logical are those which explain it: first, on the basis of an anoxemia of the respiratory center in the medulla, and second, to the diminishing vital capacity resulting from engorgement of the pulmonary circuit, encroaching on the alveoli.

The most important signs of heart failure are those of circulatory stasis which may involve, as we have stated previously, the pulmonary, portal and systemic circulations.

Generalized pulmonary edema is the result of left-sided heart failure, whereas, venous engorgement with pulsations of the veins of the neck, edema of the lower extremities and sacrum, congestion and enlargement of the liver and ascites are the result of right-sided heart failure.

When failure of one side of the heart occurs and persists, failure of the other side is bound to follow, provided, of course, the patient lives long enough. Frequently, however, the patient dies before the vicious circle has had a chance to complete itself.

Treatment

In discussing the subject of treatment, one fact is clear and cannot be too strongly emphasized, for nowhere is its truth so obvious as in the field of treatment, that the practice of medicine is not only a science but also an art. Indeed, it is an art based on facts established by clinical observation and by the preclinical sciences of physiology, pathology, pharmacology, etc. The mental attitude of the patient modifies to a greater or lesser extent the picture of his physical condition, and it is, therefore, very important to treat the patient as well as the disease.

For instance, says White (5), a patient may be overtreated and hastened to his end by the too zealous simultaneous application of a number of measures, each one of which may be valuable in itself when applied with common sense. A patient, who at home is in a chronic state of slight to moderate, but not dangerous, congestive failure, may be brought for treatment to a hospital where, in a new and strange environment, he is bled, purged, much restricted as to foods and fluids, and given a number of potent drugs. Unable to stand the train of so much effective treatment, he may die in a few days.

To attempt to make a badly damaged heart increase its output is like whipping the proverbial tired horse. But to reduce the metabolism until the demand of the tissues for oxygen no longer exceeds the available supply can often be done by absolute rest.

Physical and mental quiet should be as complete as possible. Every effort must be directed to making the patient comfortable, as a restless patient in bed often indulges in considerable muscular activity. It may be necessary to use sedatives, such as the barbiturates or bromides, to accomplish this. Adequate sleep at night should be insured, with the use of milder sedatives or even morphine, if necessary.

Fluid intake should be restricted to not more than one thousand cc. per day in any patient with edema. Thirst can usually be satisfied by giving small quantities frequently. An account of the intake and output of fluid gives very valuable information as to the water balance of the body and should be kept accurately.

The amount of salt used ought to be reduced to the minimum, or entirely eliminated.

Heart patients usually do best on a high carbohydrate diet, giving a total of about two thousand calories. The Karell diet is one of the popular diets in the treatment of cardiac edema. It consists of administering two hundred cc. of milk four times a day for one week. In many instances this is effective in

relieving the edema. However, I have found it to be a trying diet for the patient, and the addition of solid food with even two hundred cc. of additional fluids, has added greatly to his general comfort without any real sacrifice, and hence I usually modify the Karell diet by the addition of some dry toast, zwieback, or a dry baked apple.

Intravenous injections of twenty-five to fifty cc. of a twenty-five to fifty percent solution of glucose are sometimes of value in that they relieve the tissue edema by osmosis.

The most important single drug we possess in the treatment of this condition is, as you know, digitalis. The administration of digitalis in adequate amounts often produces a marked diuresis with relief of edema. This most frequently takes place in cases of auricular fibrillation with a rapid heart rate, due to the action of digitalis in slowing the rate and thus improving the general circulation. However, diuresis is sometimes seen in patients with regular rhythm even when no slowing in the heart rate takes place. Here the benefit is derived from improved contractile power of the heart muscle. Digitalis should be administered in every case of congestive failure. Unless the general condition of the patient calls for rapid digitalization, this is usually unnecessary, complete digitalization being effected over the course of several days. Sufficient digitalis is given in cases of auricular fibrillation to reduce the heart rate to about 70 to 80 per minute.

In this connection, it should be noted that at times it is advisable to attempt to reestablish normal sinus rhythm with quinidine, and thus improve the cardiac output. The general view is that once congestive failure sets in, quinidine is contraindicated, because of the danger of embolization. This is not the case. Dr. B. S. Oppenheimer (6), in a paper entitled "Clinical experiments with quinidine in auricular fibrillation", stated back in 1921 that "the increased danger from embolism during the transition from fibrillation to coordinate auricular contractions has been somewhat exaggerated". He reports two cases in which cerebral emboli occurred, with resultant hemiplegia in the course of auricular fibrillation. Both responded to quinidine therapy, rhythm being established without a recurrence of embolization either during or after the transition.

I have given quinidine in a great many cases of chronic fibrillation, at times in fairly large doses for prolonged periods, to patients in whom rheumatic endocarditis with mitral stenosis were the precipitating factors, and in other cases where arteriosclerosis was the cause of the condition, and the number of accidents that I could directly attribute to the drug was indeed very small. As a matter of fact, in my experience, in nearly all cases of fibrillation in which embolism occurred, the patients were either taking no medication at all or were receiving the usual digitalis therapy. If toxic symptoms develop as a result of adequate digitalization, its temporary discontinuance is necessary. When the rhythm is regular, the heart rate is a poor guide and the dose must be gauged approximately as one and a half grains of the whole leaf, or fifteen minims of the tincture per ten pounds of edema-free body weight, and an estimate of two grains or twenty minims per day being allowed for excretion. When the required amount has been given, a maintenance dose is continued, the amount required being usually two to three grains or twenty to thirty minims of the tincture per day.

Theobromine sodium salicylate or diuretin, given in doses of ten to fifteen grains three times a day, has given disappointing results except in mild cases. Although theocalcin is in some instances beneficial, as a rule it does not produce a spectacular response. Theophyllin in doses of three grains three to four times daily has proved efficacious in many instances, but has the disadvantage of tending to produce gastric disturbances. This can sometimes be overcome by giving the drug immediately after a meal.

These drugs are usually given for three to four days, discontinued for two days, and then readministered. The evidence available at present strongly suggests that they act by increasing the filtration through the glomeruli of the kidney. The blood thus leaves the kidney, more concentrated than normal, and replenishes its supply of fluid from the edematous tissues.

Caffeine, although an excellent respiratory stimulant, seldom causes in man any marked increase in urine volume.

In some instances considerable diuresis follows the administration of acid-producing salts such as ammonium chloride. However, the drawback to this drug is that it at times results in gastric irritability. Of late it has been available in enteric-coated tablets so that it does not dissolve in the stomach, thus overcoming this action. It is given in doses of fifteen grains three or four times a day. The method by which these drugs induce diuresis is not fully understood. It is known that they tend to produce an acidosis and this probably is the important factor. Ammonium chloride is particularly efficacious as an adjuvant to the mercurial diuretics.

Mercury as a diuretic was first used in 1886 when small doses of calomel, given by mouth, produced a marked increase in urinary output. Following the introduction of the complex compound of mercury, novasurol, mercury has again assumed a prominent place in the treatment of edema. Although toxic symptoms such as hemorrhagic colitis and evidence of slight kidney damage from novasurol were rare, it has been largely replaced by salyrgan and mercupurin, which are less toxic. These drugs are given intravenously or intramuscularly in doses of one to two cc. Care must be taken to avoid subcutaneous injection as the drug is extremely irritating. Diuresis commences, as a rule, in about three hours, reaches its height in six to twelve hours, and usually subsides in twenty-four hours. Sometimes it persists to some extent during the next twenty-four hours. The toxic symptoms which have been reported are stomatitis, hemorrhagic colitis and varying degrees of kidney damage. These have been of infrequent occurrence in my experience. In addition to the increase in water output there is a considerable augmentation in the excretion of sodium chloride. The evidence at present points to the fact that the mercurial diuretic action is due to a diminished reabsorption of fluid by the kidney tubules.

Mercupurin, which is a mercurial diuretic, in combination with theophyllin has a double diuretic effect. Since theophyllin is supposed to have its main effect on the glomeruli of the kidney and the mercurial diuretics on the tubules, there appears to be a sound theoretical

basis for the use of this combination. Recently, both suppositories and tablets of mercupurin have been introduced and I have used them with good results in those cases where the intravenous or intramuscular route does not seem practical.

Another mild diuretic is urea. It is given in doses of ten to fifteen grams three times a day. It has a slow action in the removal of edema fluid. Its most important indication is in those cases in which, the edema having been relieved by other means, there is difficulty in maintaining a water balance, so that the edema tends to recur. Following the administration of the drug, the urine volume often can be increased sufficiently so that a normal water balance is restored and this tendency overcome. Many patients have taken it over a period of years without any deleterious effect having been observed. The blood urea rises to a slight extent in the first few days but thereafter maintains a constant level, the urea given being quantitatively eliminated. During its excretion it prevents the reabsorption of a considerable amount of water by the kidney tubules. Urea has an unpleasant taste which can be masked to a great extent by dissolving it in ginger ale or coffee.

Phlebotomy is at times a measure of great value in resistant cases of edema. No method will reduce an elevated venous pressure more rapidly than venesection. Evidence of increased venous pressure ought to suggest its use in any type of heart disease. Three hundred to five hundred cc. of blood should be withdrawn, although I have sometimes produced relief of symptoms with the removal of only fifty to one hundred cc. I have seen patients with a marked rise of venous pressure unresponsive to other forms of treatment, who lost a good deal of the edema following phlebotomy. The operation may have to be repeated should the venous pressure rise again.

Transudates into the pleural cavity, even in small amounts, often cause great respiratory embarrassment, and should be relieved by thoracentesis. Ascites, unless extreme, can as a rule be relieved by the measures already described, but if the pressure developed is excessive, abdominal paracentesis is indicated. Peripheral edema which has proved resistant to other forms of treatment can be removed to some extent by the insertion of Southey's tubes into the edematous extremities. Owing to improvement in the other methods of dealing with edema, the necessity for this procedure seldom arises.

It is a well known fact that the circulation rate, and consequently the demand on the heart, varies with the rate of metabolism in the body. In hyperthyroidism it is increased in proportion to the rise in the metabolic rate, while in myxedema, it is correspondingly reduced. Complete ablation of the thyroid gland has been recommended in patients in whom the circulation could not be rendered adequate for body requirements by other means. The theoretical basis for the procedure is that compensation might be reestablished by sufficiently lessening the demand on the circulation, particularly in those cases in which the heart is overworked, trying unsuccessfully to maintain an adequate circulation. Encouraging results have been reported.

In my own experience it seemed to be more beneficial in the anginal rather than in the congestive type of heart failure. A patient of mine who suffered from as many as fourteen attacks of angina pectoris daily and whose basal metabolism rate was elevated, was operated upon. Following the thyroidectomy, the anginal seizures cleared up entirely. However, the patient's considerable increase in weight and general sluggishness, required the administration of small doses of thyroid daily.

In this connection, it is interesting to note the recent work of Raab (7) who found that small doses of thiouracil resulted in a "functional thyroidectomy" thus relieving seven out of ten patients from the symptoms of angina pectoris. Similarly, Reveno (8) reports favorable results with thiouracil in twenty-nine out of thirty-two patients with thyrotoxicosis, stating in his summary that "Fibrillation and cardiac decompensation in the thyrocardiac may be promptly controlled with thiouracil".

I am, therefore, looking forward to the time, which I hope is not too distant, when this new addition to our armamentarium will be commercially available and its efficacy in the treatment of patients with heart failure, whether anginal or congestive, will no doubt receive a more general trial.

Prognosis

A word or two about prognosis, which from the patient's point of view is more important that diagnosis. The patient wants to know, among other things, how long he must remain in bed, whether the present illness will lead to permanent disability, etc., etc. A great many factors must be taken into consideration before rendering a verdict. For example, is the pathological process from which the patient is suffering stationary or progressive? And again, what is the etiological factor responsible for the pathological process? If the condition is one of slight congestive failure due to a chronic hypertension or mitral stenosis, then it may easily be controlled for many years by moderate restriction of activity and digitalis therapy; while congestive failure, slight at first, but rapidly increasing, with syphilitic aortitis and aortic insufficiency or with coronary thrombosis as the etiological factor, call for a far graver prognosis—life often lasting for a few months to a few years at best—with much more restriction of activity.

Again, when looking into the future, for that is really what prognosis implies, we must bear in mind the patient's temperament, his general attitude toward life, his habits, the work that he does—physical or mental—and his financial circumstances.

An individual with a damaged and failing myocardium, may have enough cardiac reserve to meet the demands of a sedentary life, but he must overlook all forms of severe or prolonged exertion. Should, however, some unforeseen burden, such as an intercurrent respiratory infection come along and place an additional demand upon this nearly bankrupt myocardial reserve, then it may prove to be the straw that breaks the camel's back. We speak of it then as a terminal infection. If the myocardium is not completely crippled, competent and careful treatment may help the failing heart to weather the storm.

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175 EASTERN PARKWAY

A NEW CONCEPTION OF DIAPHRAGMATIC HERNIA

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(*Continued from page* 30)

The presence of a hole in the diaphragm diminishes or obliterates the negative pressure in the thorax, resulting in increased thoracic pressure. The suction action of the thorax is interfered with as well as the ability of the right heart to suck venous blood from the superior and inferior vena cava. The consequence, as previously explained, is the appearance of heart strain (Fig. 8).

Normally, with each inspiration the increased negative pressure in the thoracic cavity will aspirate venous blood toward the heart. The diaphragm descends and there is a rise in the intraabdominal pressure which squeezes the blood from the splanchnic veins.

A hole through the diaphragm will disrupt the mechanism. It would greatly impede the flow of blood to the right heart and diminish the negative thoracic pressure or even increase to a positive pressure. In ordinary quiet breathing there is a negative pressure of only 1 mm. during inspiration and a positive pressure of 2-3 mm. of Hg. during expiration. This increased thoracic pressure will account for the frequency of cardiac symptoms even in small herniæ.

I wonder whether the plugging of the diaphragmatic hole by an organ or tissue, may not account, or help to account for the intermittency of symptoms in these cases.

"The upright posture of man makes the back flow of venous blood difficult. During an inspiratory diaphragmatic contraction the abdominal pressure increases and the intrathoracic pressure becomes negative and the diaphragm acts as a suction pump upon the returning venous blood.

"With each diaphragmatic contraction, the intraabdominal cavity is enlarged and the intracardiac pressure is diminished, with the heart moving caudally, thus facilitating filling of the heart chambers.

"The diaphragm thus acts as a buffer, protecting the thoracic viscera from excessive intraabdominal pressure, and the abdominal contents from sudden variations in the intrapulmonary pressure." (19)

"Its (diaphragmatic) action affects the major functions of respiration and circulation of parturition and digestion.

"It is likewise true that a perfected diaphragm coincides with a mechanism developed to support high intracelonic pressure. All of these facts lead one to believe that the providing of pressure is the chief and primary function of the diaphragm." (20)

Any hole in the diaphragm neutralizes this difference of pressure for Mellies, while performing a pneumoperitoneum for tuberculosis accidentally punctured the diaphragm, as a result of which, "Aspiration of the pneumothorax and pneumoperitoneum *showed the same pressure.* Increasing the pneumothorax pressure simultaneously increased the pneumoperitoneum pressure. By placing the patient in the exaggerated Trendelenburg position, it was possible to transfer the pneumoperitoneum fluid to the thorax, and upon standing the fluid returned to the abdomen." (21)

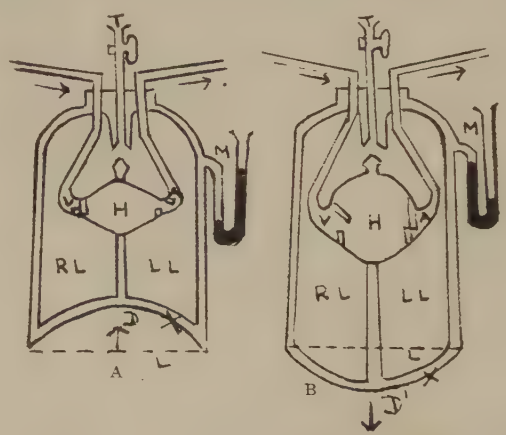

FIG. 8.—Diagram of an apparatus illustrating the effect of inspiration upon the heart and great vessels within the thorax: A. The thorax at rest; B. during inspiration. D represents the diaphragm when relaxed; D^1 when contracted (it must be remembered that this position is only a diagram), i.e., when the capacity of the thorax is enlarged; H, the heart; V, the veins entering it; and (a) the aorta; RL, LL, the right and left lung; T, the trachea; M, mercurial manometer in connection with pleura. The increase in the capacity of the box representing the thorax is seen to dilate the heart as well as the lungs, and so to pump the blood through V, whereas the valve prevents reflex through (a). The position of the mercury in M shows also the suction which is taking place (copied from Landois, ref. Foster.) X shows the diaphragmatic opening which profoundly disrupts the entire relationship between the negative chest pressure and the positive abdominal pressure.

"In endeavoring to interpret the cardiac variations in portal pressure, it is important to bear in mind that the portal pressure at any moment is determined by the balance between the inflow of blood through the splanchnic capillaries and the outflow through the liver capillaries. Whenever the portal pressure is on the increase inflow exceeds outflow and vice versa, whenever the portal pressure decreases outflow exceeds inflow." (22)

Enlargement of the liver would retard the capillary flow, yet, M. A. Lyass, who performed phrenico-exeresis on fifty dogs and twenty-five patients on the right or left or both sides, found "Disturbances of the liver (*enlargement,* sensitive to pressure and such symptoms) could be observed both in right and left sided paralysis of the diaphragm. After the operation dis-

turbances of the heart function showed in the electrocardiograph, whether in the acute or chronic stage of the experiment and also in the patients. Those changes which were recognizable spoke only for deviation of the heart axis. In pathological hearts (in animals with degeneration of the heart muscle after phosphorous poisoning and in patients with definite cardiac musculature disease) after the elimination of the diaphragmatic function, there appeared a definite aggravation of the heart function, such as extra systoles and the like." (23).

In conversation with Professor R. Burton Opitz, formerly professor of physiology at the College of Physicians and Surgeons of Columbia University, he confirms, "that *any hole* in the diaphragm would interfere with the venous return to the heart because it would neutralize the suction action of the thorax. This retardation would result in increased venous pressure and cardiac embarrassment."

G. B. Ray, professor of physiology at Long Island College of Medicine, maintained, in conversation, "that *any hole* in the diaphragm would profoundly disrupt the pressure relationship in the thorax, and would impede the flow of venous blood to the right auricle. All of this would result in impairment of heart function and a rise in venous pressure.

The symptoms of the patient will be in direct proportion to the degree of compensation that takes place.

Bleeding in Diaphragmatic Hernia

Hematemesis and rectal bleeding may be copious and may even prove fatal. The blood is more likely to be occult than macroscopic. Only recently, a patient seen in consultation exhibited the following peculiar, unaccountable blood findings, namely, hemoglobin, 33 percent red blood cells, 1,500,000; white blood cells, 4000; polymorphonuclears, 62 percent; small lymphocytes, 30 percent; large lymphocytes, 8 percent. Anisocytosis, poikilocytosis, polychromatophilia, and microcytosis were present.

A life long history of digestive disturbances with negative findings in spite of roentgenological examination (even such examinations often fail to reveal this condition—*vide supra*) was suggestive to me of diaphragmatic hernia, which was found. At no time did the patient show macroscopic blood. Actually, hematemesis and tarry stools have been frequently described in this condition. These patients are potential subjects of obscure anemias (17). In all inexplainable cases of anemia keep diaphragmatic hernia in mind.

The usual explanation of digestive bleeding in these cases is that the pressure of the diaphragmatic ring on the hernial contents shuts off the venous return of blood, causing dilatation of veins, their rupture, and subsequent bleeding.

One asks why no such thing happens in other forms of hernia, i.e., umbilical, femoral, and inguinal, where exactly the same conditions are present as the hernial contents and the ring with its pressure are analogous. Why should this occur only in diaphragmatic hernia? There must be another factor entering into this consideration. It is the presence in diaphragmatic hernia of impediment to venous return.

This case proves that no explanation is necessary other than that the venous blood is dammed back throughout the entire system, including the portal, and is impeded, as we have seen above, from entering the thorax with the resultant dilatation and rupture of veins, though the rupture is more often of a capillary nature.

How will pressure on the veins of the stomach and intestines explain the large hyperemic liver and spleen present in this case?

Recently I witnessed the autopsy of a diaphragmatic hernia the size of a walnut. The veins of the neck were markedly distended. There were tremendous esophageal varices present, not only of the lower plexus which empties into the coronaries of the stomach, but of the upper plexus as well, which empties into the azygos and thyroid veins. The pathologist could give no explanation for these findings. The only possible explanation is increased intrathoracic pressure. Retardation of venous return explains the thrombosis found in these cases, which may occur in any part of the body, including the extremities.

Two factors now satisfactorily explain practically all the symptoms attributed to multiple other explanations. The digestive symptoms are due rather to the venous congestion than to displacement in the chest of the digestive viscera. Increased thoracic pressure and the consequent damming back of venous pressure account for the cardiac symptoms, bleeding, thrombosis, distention of veins of neck, obscure anemias, and digestive symptoms.

I believe these factors explain most of the digestive symptoms. We frequently see, for instance, in cases of right heart disease, the digestive disturbances paramount, even more conspicuous than heart symptoms, from the damming back of the venous circulation and consequent congestion of the entire tract. Exactly the same thing happens here.

From this new conception, it is suggested that the presence of heart strain, anemia, evidence of retardation of venous flow, or increased venous pressure be utilized as aids in the diagnosis and treatment of diaphragmatic hernia.

Conclusions

1. Increased thoracic pressure causes heart strain which is responsible for cardiac symptoms.
2. Misplaced abdominal viscera, and the hole in the diaphragm, are responsible for increased thoracic pressure.
3. Retardation of venous flow into the thorax is responsible for digestive symptoms and bleeding.
4. A Seidlitz powder in the stomach helps to diagnose these cases; there is a gurgling sound.
5. The presence of heart strain, retarded venous flow and anemia are suggestive of diaphragmatic hernia.
6. Increased venous pressure is present in the uncompensated cases.

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36 PLAZA STREET

THE RADICAL OPERATION FOR CARCINOMA OF THE RECTOSIGMOID

With Emphasis on the Retention of the Sphincter

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This discussion concerns carcinoma of the rectosigmoid. It does not concern itself with carcinoma of the anus or of the anal canal below the line of its embryonic fusion with the descending large bowel. For these cases no radical operation can be done without the removal of the sphincter, because the lymphatic spread from the terminal bowel is directed downward and across into the perineum and from thence upwards to the inguinal glands. The entire radical operation must and can be safely done from the perineal approach.

Any attempt to conserve the sphincter is only possible with carcinoma above the line of the anal canal because the lymphatic drainage proceeds in the opposite direction from that of the anal canal, i.e., upwards to the pelvic glands. Whenever this is possible, any ruthless sacrifice of the sphincter is entirely unnecessary and unjustified.

The early history of the operative treatment for carcinoma of the rectum and rectosigmoid was marked by a number of attempts at doing this formidable operation without disturbing the continuity of the lower bowel. The chief difficulty at that time was the frequent occurrence of infection around the site of anastomosis; and this became a protracted and very difficult complication to handle. These early attempts, consequently, were gradually abandoned and led to the development of radical operations of the Kraske or Miles types in which the entire lower bowel was ruthlessly sacrificed.

With the advent of better modern and more skillful methods of operating and, especially now, with the development of efficient chemotherapy the difficulty produced by this rather dangerous complication seems to have been entirely removed. Because of this the past few years have been marked by the renewal of conservative activity in performing the radical operation for carcinoma of the rectum and of the rectosigmoid in such manner that the sphincter was retained and without the necessity for colostomy or other form of cloacal opening in the perineal or sacral region.

Radical operation with retention of the sphincter is technically feasible when the tumor has not involved the pelvic wall or the adjacent viscera too extensively, when lymph node metastasis is not beyond reach, and when distant metastases are not present. One can widely remove the entire malignancy with all of its lymphatics and all anatomically associated lymph glands; one can include a wide dissection and excision of any suspicious tissue, if the tumor has already perforated the bowel wall; and, if necessary, one can also include the removal of any neighboring organ (uterus, prostate, etc.), if it should seem to be involved by extension of the growth. Many times it is still possible to retain the sphincter when all of these provisions have been adequately met.

The successful accomplishment of this operation does not materially affect the chances for any subsequent local recurrence or distant metastasis. Local recurrence usually follows local conditions in which the malignancy has already penetrated the rectal wall and spread into the perirectal tissues or lymphatics. This can be avoided by sacrificing the sphincter. Dissection outside of the rectum regardless of the latter is limited by the physical conditions of the pelvic cavity. Distant metastases are likewise independent of the type of operation provided enough tissue can be sacrificed on all sides of the growth. Frequently conditions for metastatic formation are already determined even before operation is undertaken.

Healing at the line of union in any such resection in continuity, depends, of course, upon the available

blood supply and this, in turn, depends upon the point of ligation of the superior hemorrhoidal artery. A high ligation is frequently necessary but this should and can be anatomically tempered by the will not to be unnecessarily ruthless when the occasion does not demand it. If there has been judicious arrangement of the lines of section, a relatively good blood supply can frequently be retained and the amount of marginal necrosis can be limited. Primary union between the two ends of the bowel is not the rule and should not be expected; nor should its nonoccurrence disturb one. Commonly, a fecal fistula forms temporarily and the wound heals completely thereafter by granulation.

Resection of the rectum or of the rectosigmoid in continuity with retention of the sphincter undoubtedly creates a greater technical problem than total extirpation of the rectum and anal sphincter. Two difficulties prevent a wider willingness to conserve the sphincter in suitable cases. The first is the difficulty of securing primary healing in the line of intestinal suture. But this is actually no greater than in similar resections of the sigmoid proper with end-to-end suture and there should be no differentiation on this score. The second difficulty has been infection. But as previously indicated, modern chemotherapy (a combination of antigas serum, sulfasuxidine, penicillin, etc., before operation, locally in the wound, and immediately thereafter) has made this risk relatively small.

At the present writing, one may not in this kind of major surgery expect the smoothness of convalescence and healing usually obtained in other types of major surgery which carry the possibilities of primary suture and healing, but the reward in personal satisfaction and in gratefulness of the patient is so great as to make the effort very much worthwhile.

The method of approach for the performance of the radical operation does not materially alter the possibility of doing a resection in continuity and retaining the sphincter. The latter may be combined with any of the types of combined abdominoperineal or abdominosacral approach and technic, as well as with purely posterior types of operation via the sacral or perineal route. In the light of our present knowledge of the spread of the disease, the type of operative approach should depend on whether the growth is entirely below the peritoneum, above and below, or entirely above, as well as whether the disease is still local or has spread to the lymphatic channels.

In actual practice the following methods of operation are available depending upon local and general conditions, physical structure of the patient's body, etc.

Methods of Operation

1. In the lower reaches of the sigmoid loop and the upper end of the rectosigmoid it sometimes happens that the location of the tumor leaves just enough room below the tumor for a resection and an end-to-end suture. However, this is really an intraperitoneal resection. While the technic is difficult, it is not insuperable, and I have had very good results with this type of operation. This is a most advantageous technic and I make use of it whenever possible. It can be done in a fair number of cases. The mortality is exceedingly low and the immediate and late results are good.

2. Malignant adenomata of the rectosigmoid while pathologically malignant are clinically relatively benign. In many cases when conditions are favorable they lend themselves to a local excision of the tumor bearing area of the rectal wall with immediate repair of the rectal defect. Good healing follows quickly. I have quite a number of these cases with follow-up records varying as long as twenty years in which there have been immediate good results and no recurrences have followed subsequently.

3. The Mikulicz technic has been applied by Küttner (10, 11) and Babcock (1, 2, 3) to the perineal operation. The tumor bearing area is delivered through the perineal or perineosacral incision and treated as a double barreled colostomy which can subsequently be closed in the usual manner. This is most commonly done as the terminal step of a combined abdominoperineal and/or sacral method of resection, but in some cases it can be done without the preliminary laparotomy. I personally do not like this method. In the absence of any obstructive phenomena, I prefer to do an immediate anastomosis and I have never had cause to regret it. (vide infra).

4. Various types of "pull-through" operations (Hochenegg, 8; Mandl, 12; Burch, 5, 6;) in which the lower segment of the bowel, after the tumor bearing area has been excised, is pulled through the dilated sphincter either with or without the anal stump. Originally this was done as a posterior operation and this technic is most feasible in women. It is, however, possible to incorporate this as a terminal stage of a combined abdominoperineal and/or sacral operation. However, the operation never was clinically successful because of the sometimes dangerous, and always therapeutically difficult secondary abscesses which formed. I have never done this operation also for these very sufficient reasons.

5. All growths below the peritoneum that are reasonably early and mobile should be removed by the perineal and/or sacral method rather than by a combined operation, and whenever feasible with immediate anastomosis. Those that are partly above and partly below can, in many instances, be dealt with in the same way, provided the tumors are not too far advanced, too large, and/or too far up, and there is sufficient mobility. The feasibility for, and the facility with which this can be done depend upon the length and mobility if the attachments of the lower bowel and of the mesosigmoid. It is remarkable how frequently one can do all of the operation from below through the perineal and/or sacral approach.

This method was used by Grey-Turner with considerable success in 1935, and by Wood and Wilkie (16) earlier. The various steps of the operation include incision along the left border of the sacrum well down below the coccyx, with or without excision of the coccyx, and, if necessary, the lower segment of the sacrum and sufficient liberation of the rectum and its fatty capsule, mesorectum, and glands well into healthy tissue. The tumor-bearing portion of the rectum is sectioned between clamps and the proximal extremity is sutured to the anal stump in the orthodox manner.

In favorable cases, especially in women with a justomajor type of pelvis, it is possible to avoid resection of the sacrum and sometimes even of the coccyx. This is the perineal type of operation. It carries with it many advantages from every point of view.

I have done this operation many times with eminent-

ly successful results. Some of these cases have a follow-up of over ten years. Healing has not been too protracted and there has been little, if any discomfort.

6. For all cases of growths higher up in the rectosigmoid and for all apparently operable cases in which the evidence points to advanced disease, with the exception of those growths above the reflection which can be dealt with radically, as indicated previously in group 1, the combined abdominoperineal or abdominosacral procedure is indicated. This permits the preliminary examination of the abdominal viscera, the extent of the upward spread of the disease, and the determination of its operability.

The steps of the operation include a left lower rectus incision and the thorough exploration of the abdomen and the area of local disease. Everything being satisfactory for the radical procedure, the sigmoid is drawn up, and its peritoneal attachment circumscribed as deep as possible in the pelvic peritoneum. The bowel is freed digitally all around and as far down as the sacrosciatic notch. Care is taken to avoid the ureter and to protect the base of the bladder from injury. The mesosigmoid is sufficiently ligated to give the necessary mobility with due attention to the blood supply of the lower loop. Then the entire freed and mobilized mass is pushed far down into the pelvis and a new pelvic floor is created above it by suturing the edges of the cut peritoneum in several layers. Then the abdomen is closed in layers after any necessary drainage is provided.

The patient is then turned on the right side and the posterior step of the operation is done as previously indicated when no preliminary abdominal part has preceded it.

I have done this operation also many times, have had good immediate and late results and few recurrences. I am quite satisfied with it.

I am personally not in favor of reversing this procedure into a perineoabdominal or sacroabdominal operation, in which the posterior part of the operation is done first in a preliminary attempt to do the complete operation from below. If one decides to remove a carcinoma of the rectum through a sacral or perineal approach, there should be more than reasonable certainty that the operation can be completed by this method.

The immediate success or failure of the various methods of combined operation depend on the same physical factors as when the abdominal part of the operation is eliminated, i.e., adequate mobilization, a long mobile sigmoid, absence of sigmoiditis and mesosigmoiditis, and an adequate blood supply. As experience accumulates, the possibility of retaining the sphincter increases without enlarging any immediate or future risk of mortality or recurrence.

It seems unnecessary to add that the radicality of any operation is in direct proportion to the earliness of the diagnosis and of the operation. An important physical factor is obesity; in extreme cases this can be an almost insurmountable obstacle to the performance of the operation, to the subsequent recovery of the patient, and to the healing of the wound.

The success of the operation in this type of major surgery is always in direct relation to the skill and experience of the operator and the helpfulness and teamwork of the assistants. Good postoperative care is of equal importance, and depends to a large extent upon the facilities of the hospital and the faithful care and attention of the nursing staff.

In certain circles two stage operations are practiced in the abdominoperineal or abdominosacral forms of radical procedure in which a preliminary colostomy is made in advance of the radical excision. However, and most important, whatever is gained by the socalled safety of multiple stage operation is lost in the increased danger of the second or subsequent stage. In the absence of obstruction, I have had better results with a primary one stage operation, and I reserve two or multiple stage operations for the obstructive type of cases.

The decision to do either a posterior operation or a combined abdominoperineal and/or sacral operation is one which should primarily be determined by the anatomical situation of the growth alone. Little is apparently gained from the point of view of late recurrence or metastasis by preferring one or the other of these two methods. As a matter of fact, a number of years ago, Kraske (9) reported his experience with his posterior operation in over five-hundred cases, and if anything, the results were better than after reported combined abdominoperineal and/or sacral operations.

In the preparation of these patients for operation, besides the usual cleaning out of the intestinal tract, I have found it useful to saturate them as much as possible for several days preceding the operation with sulfasuxidine. This seems the best of the chemotherapeutic group of drugs for cases of this type. Immediately after operation, the chemotherapeutic effect is kept up by penicillin and sodium sulfadiazene given at first intravenously and later orally.

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12 EAST EIGHTY-SEVENTH STREET

THE VALUE OF RADIUM IN VARIOUS DISEASES*

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Report of a Case of Epithelioma of the Left Lower Eyelid Successfully Treated by Radium

Aaron W., about forty years old, had an epithelioma of the left lower eyelid, which extended about two inches downward with much destruction of the skin. He was seen by an eye specialist and a skin specialist, neither of whom seemed to be anxious to treat him. The skin specialist thought that radium treatment might be tried, but demanded a large fee for its application. The patient applied to me for help. I said I had radium and would try to do all I could for him (without any charge). In order to carry out the application of radium successfully, it was necessary to localize its action on the diseased part and to protect the healthy part of the cheek from the radium rays. For this purpose I constructed a heavy metal cup, in which there was a groove for the position of the rubber capsule containing the radium flask (Fig. 1). The cup was put on the diseased eyelid, fastened with adhesive plaster and the patient would lie for half or three-quarters of an hour on a lounge without moving about; afterwards the plaster cup was freed from its position and the patient allowed to get up. This treatment was kept up daily for five weeks and a real cure obtained, the left eyelid and cheek being free from sores and the skin perfectly well.

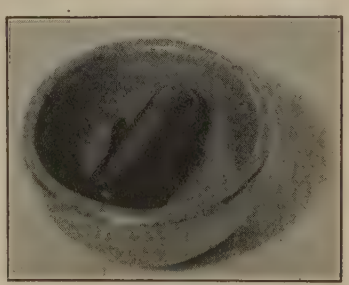

FIG. 1.—Heavy metal cup especially devised for the application of radium in an epithelioma of the lower eyelid. It contains a hard rubber capsule in which the radium is lodged.

I present here a minute description of the metal cup and the special radium container. The metal cup has a circumference of thirteen centimeters, a diameter of four and two-tenths centimeters, and a depth of three centimeters. The weight of the cup is 128 grams. The radium container consisted of a hard rubber capsule, in which was lodged the radium flask. The reason the metal cup was made so heavy was to prevent the spreading out of the action of the radium on the further parts of the cheek.

I reported the case years ago in the German Medical Society (now called the Rudolf Virchow Medical Society). The patient was cured of his malady in about five weeks. I saw the patient about ten years later when he was feeling very well, having had no return of his former troubles.

Some Beneficial Action of Radium in Numerous Cases of Cancer of the Esophagus and in a Few Instances of Cancer of the Gastrointestinal Tract

In nineteen cases of esophageal obstructions, mostly of a cancerous type, there were three instances in which there was no improvement noticeable after the applications of radium, while in sixteen there was a marked widening of the strictured area. The patients could partake of food more easily, and in some of them the swallowing sound became audible. In this latter group there was no need of establishing a gastric fistula.

In cancer of the stomach the application of radium 0.05 gms. curie units in a rubber capsule was applied for an hour at a time within the stomach every day or every other day. In some of the cases we applied the radium capsule within the stomach for six hours in succession, without any evil results. In one of these cases the patient had been operated upon in 1909 for a tumor of the stomach. Since then he had been running down more and more, and for about three months he had also suffered from anorexia and difficulty in swallowing. An examination on February 15th revealed an obstruction the size of a walnut under the left border of the ribs. The swallowing sound was absent, and a sound (39F.) met with resistance at forty-two centimeters. Shortly after admission to the hospital the patient had a severe internal hemorrhage (melena) from which he nearly died. After a few days, however, he rallied sufficiently to undergo an instrumental examination.

The patient received an application of 70 mg. of pure radium bromide for one hour on March 7th, 9th, and 15th. On March 22nd and April 1st he was given applications of radium of six hours' duration. His condition visibly improved during the treatment. The resistance at the epigastrium was no longer palpable and the patient could take mushy and soft food without difficulty. On March 27, 1911, the swallowing sound was present after six seconds. Examination with the bougie (43F.) showed on March 30, 1911, resistance at 43 cm; bougie (25F.) met with resistance at 44 cm. The patient has gained considerably in weight and in strength. The tumor could not be palpated, i.e., had disappeared, and the patient remained well.

In most cases of cancer of the stomach, there is

*Read before the New York Medical Union, November 27, 1945.

always a diminution of the usual oozing of blood, which so frequently accompanies the malignant lesions.

Cancer of Pylorus

In two cases of cancer of the pylorus we tried to apply radium directly to the obstructed area by localizing this spot by a string weighted at the end by a small

FIG. 2.—The esophageal receptacle with tubing and mandrin; the capsule at the end consists of rubber and in it is lodged the required radium flask.

lentil-shaped ball, which passed the malignant area. A whalebone carrying at its end a capsule with radium is made to go over the line leading to the obstruction and here left for half an hour or an hour. The radium capsule would meet the obstructed area and in this way act on the malignant spot. While no real cure was achieved, it seems that there was a beneficial effect visible. It seems to lessen the bleeding, and the patient could stand more food and be more satisfied.

Cancer of Rectum

In cancer of the rectum, the radium can often be useful. I shall mention only one case. The patient, the mother of a well-known physician, was examined by me at his request. On examination of the rectum I found, high up, an irregular tumor not connected with the uterus; withdrawal of the finger disclosed the

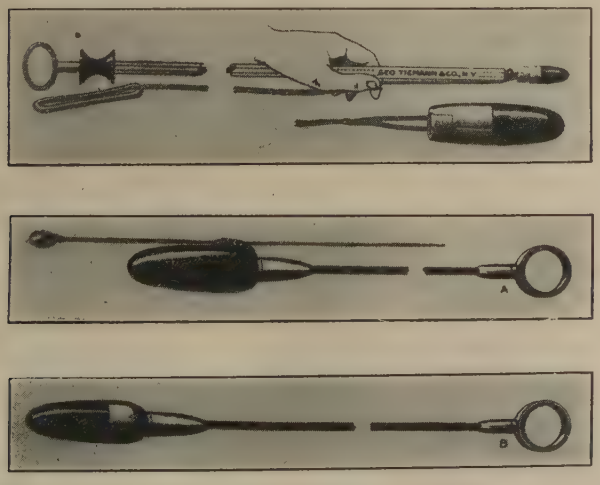

FIG. 3.—A. Radium receptacle for stomach and esophagus with whalebone stem.
B. Radium receptacle for pylorus, with whalebone stem and a side opening in the radium capsule for a small ball which had passed pylorus.

presence of decomposed blood and mucus. An operation was refused by the family physician and the patient. Radium treatment, which consisted of the application of radium 0.05 gms. (curie 20,000 strength) per rectum to tumor, was begun, and used for nearly two years every day for one hour. The hemorrhages ceased after a few weeks, and the pains grew less. Then the patient was left for about four months without radium treatment. The pains returned, however, and one application of 0.07 gm. pure radium bromide was made for six hours at one time. During this application the patient was lying in the prone position, with her pelvis elevated, in order to effect a better contact of the radium with the tumor. She stood this very well and the application seemed to exert a good influence. About three years after the trouble began the patient still had a comfortable existence. She received company, ate at the table with her family, and seemed to have little trouble. The tumor was still plainly palpable, but did not bleed.

The Radiodiaphone

I should like to make a few remarks regarding the radiodiaphone for this instrument may be useful in physicians living in the country, not having all the

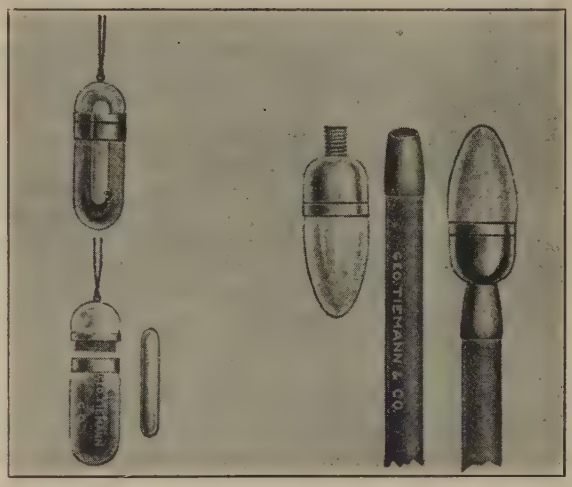

FIG. 4.—A. Radium receptacle for stomach and rectum.
B. Radium receptacle for the esophagus and rectum.

facilities of x ray and other implements at their disposal.

The radiodiaphone consists of a radium containing hard rubber capsule attached to a whalebone bougie covered with rubber. It must be handled in a dark room. It is introduced into the empty stomach and moved up and down along the stomach and esophagus and inspected with Kahlbaum's barium platinocyanide screen. The radiodiaphone shows illuminated areas along the stomach and esophagus. At times lesions along the lungs and esophagus can be recognized by their density.

On the whole, I would say that the radium proved of benefit in a great many instances and certainly allayed pain, so that I would subscribe to the well-known dictum: "Divinum est opus sedare dolorem".

I personally had to give up the handling of radium, as I began to suffer from split fingers due to radium. For this reason, I stopped working in this line about twenty-five years ago. But the future use of radium will continue and we will gain much benefit from it.

Before concluding this paper, I wish to express my thanks to Tieman and Company, who made the instruments which I have described, and to my nephew, Irving Adams, who prepared the illustrations.

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20 EAST SIXTY-THIRD STREET

TINNITUS AURIUM, DIZZINESS AND DEAFNESS

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Philadelphia, Pa.

In a continuation of the previously reported work with prostigmin injections in the treatment of tinnitus aurium, dizziness and deafness, which I conducted in collaboration with T. Carroll Davis, I herewith report the successful treatment of additional cases of these conditions, with improvement and cure. The prostigmin treatment used and recommended has been found to be equally as good as formerly stated, and its use has continued to cure these conditions. Patience and perseverance, however, are required by the patients. I have improved the treatment perceptibly by increasing the dose of prostigmin given by injection.

Increased Dosage

Originally I injected one cc. of the 1 to 2,000 prostigmin methylsulphate solution. I have increased it one-half, and I now inject one cc. of 1 to 2,000 and one cc. of 1 to 4,000 prostigmin methylsulphate solution at one time. This improves the treatment. The response to the new dose is better and quicker.

Case Reports

Case I.—This is an unusual case. Miss R. lost her hearing in the right ear eight years ago. A recent cold caused deafness in the left ear, and then something had to be done. On April 29, 1944, she came for her first treatment; on May 2, 1944, she returned for her second treatment, and on May 9, 1944, she received her third treatment. At that time she said that she had heard an alarm clock in her bedroom ticking during the past week—the first time in eight years. Noise (tinnitus aurium) ceased at times. On May 16, 1944, she returned for her fourth treatment, when she complained of hearing so much "noise", which is the first complaint of these persons as hearing improves. On May 23, 1944, she came for her fifth treatment. She said she heard her sister-in-law walking in the kitchen, and it sounded so loud and heavy she wondered what was the matter. She also said that for the first time she had heard the radio, located on the first floor, while she was in the cellar.

She then tried to get a position, but a little difficulty showed in the test and she returned for two more treatments in the autumn. The severe winter of 1944-1945 caused her to have a number of severe head colds, which caused swelling of the eustachian tubes and her hearing rapidly grew worse. She returned for three more treatments and then stopped. She needs further treatment.

I regret that not all cases will respond as quickly as this one. I have had a great number of cases that progressed slowly from a slow beginning, but the improvement was gradual and persistent.

Case II.—The patient, Mrs. I., had two perforated ear drums, and her hearing was reduced to 5/40 in each ear. After a few months' treatment she could hear 30/40 with each ear. She is much pleased with her improvement.

Case III.—The following letter tells its own story and constitutes a case report in the patient's own writing:

Chicago, June 19, 1945

Dear Doctor Rommel.—On January 15, 1943, I wrote you asking your advice on taking prostigmin injections for my hearing. At that time I was quite deaf, and had very loud head noises. You were very kind in answering my letter and advising me to try the injections. I started with two each week for six months, then one each week for one year, and am now on one every two weeks. Three years this coming January. I have had a great improvement in my hearing and the head noises are now quite soft. My doctor is not an ear specialist, so is in doubt as to the length of time I should continue taking the injections. Would you kindly inform me if I am taking prostigmin over too long a period or can I continue the treatment and not endanger my health?

I am fifty years of age, healthy and extremely happy over my improved hearing, and am afraid if I discontinue the treatment I will become hard of hearing again, as my mother, aunts and cousins are deaf. Do you think the prostigmin pills do the same work as the injections or can I continue the shots for a longer period?

I shall be grateful to you for any advice, or if you do not care to advise me will you write my doctor, as he is very anxious about my case. His address is Dr. J. Norman Smyth, 841 East Sixty-third Street, Chicago, Ill.

Thanking you again for your kind interest, I remain,

Respectfully,

Mrs. D.

I do not know of any injurious effects from the prolonged treatment with prostigmin. I advised Mrs. D. to continue the prostigmin injections. The tablets are not as effective as the injected solution, but they are a useful adjuvant.

The treatment consists of attention to the nose, throat, eustachian tubes, and ears. Catarrhal conditions must be treated. The eustachian tubes must be opened, the Politzer bag being used, hypertrophied turbinates reduced with tuamine sulphate two percent or ephedrine solution; sinus conditions treated, pharyngitis treated, and cerumen removed if found. I prescribe tuamine for the patients to use, eight drops in each nostril night and morning. I also order prostigmin bromide tablets once, twice or three times a day. Two treatments a week are preferable.

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PSYCHOLOGY OF FRIENDSHIP AND ACQUAINTANCESHIP

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The present paper had its inception in a letter from a physician who, after reading a paper of mine on the psychopathology of ingratitude in a medical journal, requested reprints of some previous papers dealing with hypocrisy, gambling, and cynicism, "in order to understand my friends better". It is obvious that behind his ironic formulation were hidden some deep disappointments.

This strange formulation of my colleague started in me a trend of thoughts; private and professional recollections, theoretical considerations, and practical applications. What do we see unconsciously in our friends? What do we need them for? What distinguishes them from acquaintances? How much can we reasonably expect of both? What protective measures must we take to avoid being hurt too deeply?

Freud uttered, forty years ago, the aphoristic remark that friendship[1] represents a *sublimated,* that is, *de*-sexualized, unconscious homosexuality. Since every human being is bisexual, "purified" remnants of homosexual tendencies must be placed somewhere, and friendship is such a harmless depository. That statement was later taken up by many colleagues. I personally have always been skeptical as to whether that reasoning, however correct it may be, covers the whole problem, and suspect that it describes but one facet. My doubt is based first on the banal observation that in every friendship a good deal of real aggression is hidden, which, in specific circumstances—for instance, after the breaking up of a friendship—comes to the fore. This aggression is real from the start and not secondary, as is often observed in disappointed lovers. Second, the assumption that has been present from the beginning of psychoanalytical science that homosexuality corresponds to a quantitative increase of one of the inborn tendencies, proved insufficient for the explanation of the perversion homosexuality,[2] as Freud himself hinted. It is more or less acknowledged analytically today that a precise distinction must be made between "unconscious feminine identification", which every human being experiences at the time of the "negative (inverted) oedipus complex" and the perversion homosexuality. The "negative oedipus" denotes, as Freud proved, the fact that the boy (to simplify matters to speak only about the male child) not only is libidinously attached to the mother and hates the father as competitor ("positive oedipus"), but at the same time unconsciously identifies with the mother and wants to be loved by the father. Here the father is loved and the mother is the hated "competitor".

If one has in mind that every man has unconsciously this feminine identification, too, which leads to passive tendencies toward men, there is no objection to using the formulation that friendship has something to do with "homosexuality". The trouble is that the public is greatly confused about these two types of homosexuality—a spurious one and the perversion; therefore such a statement must always be qualified. Perversion homosexuality has nothing to do with friendship; the perversion homosexuality is a specific "oral" neurosis.

These disguised unconscious feminine tendencies in every man have to be placed somewhere. There are many possibilities; to name a few: friendship with a more aggressive and dominant man, or the predilection for mystery stories,[3] in reading which one unconsciously identifies with the victim, enjoying the passive pleasure of being overwhelmed and the feeling of uncanniness. An example of neurotic deposition of these feminine tendencies is found in the man of the "milk toast" type, who marries a shrew in order to be mistreated. Such a man unconsciously assumes the feminine rôle, making the man out of his aggressive wife.

Friendship, therefore, must have other unconscious reasons as well. What are they?

First of all, *narcissism* plays a decisive rôle. Friendship is but a "mutual admiration society" *à deux.* The unspoken unconscious formula is: "Provided you let me play the 'big shot' in your presence, I shall do the same for you." Many a friendship is shattered by "selfishness" of one of the participants, that is, one-sided unfulfillment of the unwritten contract.

Second, friendship demands *temporary restriction of aggression.* The unspoken understanding is that aggression should be directed at the common personal enemy or institution. Too often, difference of interest interfere (for instance, one party makes peace with the adversary), or one party is incapable of restricting his aggression any longer, usually because his narcissism is offended.

Third, *in general friends expect too much of each other.* Instead of understanding that common ground is possible only on a very specific and tangential segment, the "hunger to be understood" goes so far as to demand full inner acceptance. In the highlight of friendship a great deal of leniency is discernible via temporary unconscious identification. The critical function is only temporarily excluded, however, and comes back. In the unmerciful light of reality, things look different.

Fourth, *human aggression is constantly underestimated* in friendship. Aggression accompanies every human being like his shadow. People ask in friendship an exclusion of aggression—that's too much. A non-ambivalent human relation does not exist. There is no doubt that aggression plays a greater rôle in friendship than is generally admitted. Unconsciously friends often enjoy their respective misfortunes. Gloating is always present. The best that one can expect, knowing human nature as it is, is that the gloating remains in the unconscious, consciously covered with commiseration and help. Some people unconsciously choose their friends according to Spinoza's principle: *Solamen miseris so-*

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[1]I speak of friendship between two persons of the same sex. Friendship between persons of opposite sexes is a complicated problem which needs a separate investigation.

[2]See the writer's "Eight prerequisites for psychoanalytic treatment of homosexuality", *Psychoan. Rev.,* 3, 1944, and "The respective importance of reality and fantasy in the genesis of female homosexuality", *Jour. Criminal Psychopathology,* 1943. Both papers contain a cross section of an extensive literature on the subject.

[3]See "Mystery fans and the problem of potential murderers", *Amer. Jour. Orthopsychiatry,* 2, 1945.

cios habuisse malorum. Others choose friends who are worse off than they—only as an inner alibi for the fact that they didn't achieve their goals, either.

Fifth, the usually encountered nonacceptance of the fact that friendship is just a *"circumscript safety zone" where two lonelinesses meet* leads friends to find, after some time, that the recipient of their friendship is "ungrateful". The problem is not quite understandable without a short survey of the psychopathology of ingratitude[4]. Gratitude as a moral requirement presupposes that human beings react logically, the reasoning being, "I did you a good turn; you have to act accordingly." What is overlooked is that gratitude has an affective case in history. Let's look at its genetic record. The very young child does not feel gratitude for food, loving care, attention and gifts, since he misjudges reality in the most amazing way. His yardstick is his own megalomania. Freud and Ferenczi have advanced the idea that the child learns only gradually to distinguish between his own body and the outerworld. Consequently he regards everything "good" coming from the outerworld, not as such, but as a gift he gives himself; only the "bad" refusal comes from the outside, according to this fantasy.

Gratitude has, therefore, a bad start. But the adult "forgets" only too conveniently his own early youth. Were he to remember, he would see the picture differently. He would recall that he took everything "good" for granted, that he considered every denial, as necessary as it might be and even for his own good, a terrible injustice. Every educator knows that gratitude and decency in general must be taught to the child. Gratitude as an inborn drive is clinically not observable. What is seen clinically, however, is a difference in the success of the effort to teach expression of gratitude.

We expect from a cultured, decent human being, gratitude toward his benefactor. The fact that "grateful" people do exist proves that pedagogy is not as hopeless a task as some pessimists assume. Parents do build up the feeling of gratitude in the child by making it a moral dictum. Since the child identifies with his parents, he can, if he is one of those not too neurotic persons sometimes euphemistically called "normal", restrict his original feeling that everything done for him is to be taken for granted and even show gratitude. In other words, the ability to show gratitude is an artefact built up after overcoming early misconceptions. It is a part of the adaptation to reality.

The majority of people are neurotic to some degree. Freud once mentioned his feeling of fright at the realization that he had the whole of humanity as a patient. This does not mean that everyone has a full-fledged neurosis. It means, however, that everyone has neurotic tendencies. If these tendencies increase quantitatively, we speak of them as neuroses.

One of the necessary weapons of education is restriction. If the child interprets this restriction as malice—and the more neurotic he is the more likely he is to do so—he acquires a feeling similar to that which a patriotic Frenchman had toward the Nazi invaders of his homeland—that everything is permissible against the aggressor. If one objects that the example is absurd, since there is no possible comparison between loving parents and barbaric brutes, the answer is that unconscious misjudgment of reality is one of the basic neurotic symptoms and signs. One cannot argue with a neurosis on logical grounds, especially since the child projects his own aggression onto his parents. The witch of fairy tales, who eats children, is a product of this conception.

Another objection might be raised at this point. One might say that, even if the situation in early childhood were as described, it would seem that the child would grow up and correct his misjudgment. True, the neurotic child grows up. His unconscious, however, does not. Neurosis is basically an anachronism; the repressed part of the personality governs. His Majesty the Baby in the neurotic individual is the leader, not his logic, that is, his consciousness. No neurotic is unconsciously as old as his birth certificate indicates; in unconscious development he has remained between the ages of one and three.

All educational restrictions concerned with libidinous and aggressive wishes lead the child to feel frustrated, with resultant feelings of hate. Basically he has two ways out of the dilemma: Identification with his educator or unconscious continuation in a disguised form of the old "slave revolt" at the price of suffering. Choice of the former way results in normality; of the latter, in neuroses of different types, depending on the genetic level of the fixation or regression.

Another objection might now be raised: If we grant that the child in the grown up prevents gratitude, how can we account for the direct acts of aggression and "meanness" with which some persons repay their benefactors? Clinical experience proves that it is really dangerous to be "nice" to some people; they immediately repay such treatment with some mean trick, whereas previously they showed only indifference. The explanation of this enigma is that the benefactor, by his kind deed, enters the "magic circle" of the patient's neurotic repetition compulsion. The neurotic then uses him unconsciously as a hitching post for the repetition of "injustices" allegedly experienced and seeks revenge on him. The fact that the accidental benefactor is not identical with the early "disappointers" and has himself caused no disappointment does not matter; unconsciously he is identified with the early "disappointers", and all hatred, real or compensatory, is heaped on him. He is the innocent victim of the repetition repertoire of his neurotic beneficiary:

> "Now hatred is by far the longest pleasure.
> Men love in haste but they detest at leisure."
> —LORD BYRON, *Don Juan*

Two other factors must be taken into account to explain the inner aggression of some neurotic individuals toward their benefactors. First is the limitlessness of the child's desire for love and exclusive attention. The moment the benefactor is thrown into the neurotic circle of the beneficiary's past, his deed of kindness is measured unconsciously, not according to real facts, but according to imaginary ones. His good turn is compared inwardly to the alleged lack of love, attention, and kindness about which the beneficiary inwardly grieves. This debt is projected upon the benefactor, with the result that his deed becomes an infinitesimal part-payment of an old debt. Thus the neurotic, by means of this queer form of unconscious mathematics,

[4]See the writer's "Psychopathology of ingratitude", *Diseases of the Nervous System*, 6:7, 1945.

changes a kind act into a negligible installment on an unpaid "billion dollar" obligation.

The second factor to be considered is the quantitatively different amount of unconscious self-damaging tendencies from which every neurotic suffers as an indispensable condition of his neurosis. "Psychic masochists" have a queer approach to reality. They are submissive toward the stronger person but very aggressive toward the weaker. The moment the benefactor does a good deed, he is inwardly classified as "weak" and consequently treated by the neurotic with all the aggression at his disposal. Therefore, not gratitude, but quite the opposite, aggression appears on the surface. England's famous Dr. Samuel Johnson stated: "Gratitude is a species of justice." True, but he forgot to mention that *unconscious* justice is regulated, not by reason but by irrational feelings.

Moreover, some people are incapable of "taking" a graceful action, and provoke in return until their benefactor becomes disgusted with them. Numerous anecdotes have reference to this. For instance, there is the story that in a small community an elderly ne'er-do-well was invited once a week to dinner by a wealthy man. Although the ne'er-do-well had excelled previously only in exorbitant eating, one day he brought with him an uninvited young man. After dinner his host asked him, "Who is the young man?" "Oh," was the answer, "that's my son-in-law, and I promised him food and a home in his marriage for the first years . . ." If we interpret this story, we see that the beneficiary does not want unconsciously the gift bestowed on him, but rather provokes being thrown out, that he may have a new source of complaint, overlooking, of course, his own unconscious provocation.

Some beneficiaries have convenient methods of discarding their specific benefactors—by misjudging their motives ("He did it for publicity," or "He did it to make me feel humiliated," etc.). Or they even believe that the benefactor should be grateful to them for the opportunity to "straighten out his accounts with God" by doing a good deed.

Some people advance the idea that gratitude is so seldom encountered because people do not want to be reminded of their own beginnings, when they needed help. This deduction is faulty. People forget their previous dependence and their bill of gratitude because they live unconsciously on the basis of the "autarchic fantasy". This unconscious fantasy negates everything worthwhile as coming from the outside; once more, we are confronted with childlike megalomania. We sometimes see a display of gratitude on an irrational basis. "Simple" people are sometimes grateful because they feel that a kind act of a person whom they consider socially above them brings them psychologically into the orbit of the higher social stratum. Via identification, they pay tribute in their gratitude—to themselves. Sometimes exactly the opposite attitude is encountered: Every kind action of a benefactor on a socially higher level is made worthless by the beneficiary's inner thought of the injustice he experiences in not being on the same economic or social level.

Sixth, friends are unfamiliar with the unconscious reasons for assuming the attitude of the *"helping friend"*. Friends help each other because they are "decent", because they feel obliged to, sometimes because they "cannot help" themselves. Experience proves that the less one asks, the better cemented friendship becomes.

One of the reasons friends help each other is a psychologic mechanism called the *"magic gesture"*.[5] A magic gesture is an unconscious dramatization of a repressed reproach against the parents in infancy for "injustices" allegedly experienced through them then. If a child develops this fantasy of being unjustly treated, *one* of the many means he may use to cope with it later in life is that of treating other persons in the way in which he wanted to be treated—kindly. A three-layer structure is discernible in this mechanism: First, masochistic enjoyment; secondarily, warding off of this masochism with pseudo-aggression; and last, warding off of the defence, too, with pseudo-kindness. Here is an example from a complicated analysis[6]:

> The patient was among other things a reckless spendthrift. This brought him into serious conflict with his stingy mother, toward whom he used this method of showing aggression, socially and financially. In addition to motives of unconscious revenge, self-injury, and oral greed, a further curious incapacity to make a decision in the selection of objects for purchase came into play. Wishing to order three shirts, the patient went to an expensive shop, where he was shown hundreds of samples. Very definitely and without hesitation, the patient narrowed down the choice, selecting perhaps thirty samples. Although he could readily separate the ones he liked from those he considered in bad taste, he was incapable of making a further choice among those that appealed to him, and according to his statement, there was no way out of his indecision but for him to order the entire thirty.
>
> He went, on another occasion, to a book store to buy a particular, recently published book. The bookseller showed him several dozen publications which had appeared within recent months. The patient rejected a number of these on the ground that the authors did not interest him. About fifteen books remained, and the patient, unable to come to a decision, bought all fifteen.
>
> From the history of this patient we learn that among her six children his mother preferred some and neglected others. The patient felt that he had been discriminated against. By means of his extravagance and indecision, he acted out a "magic gesture". Unconsciously he performed a symbolic act, clearly an act of aggression toward his mother, designed to show her how he would have liked to be treated. "You, Mother, have discriminated among your own children—at all events, you have played favorites. I, however, cannot even choose between indifferent objects—shirts, books, etc. How much less would I be capable of doing so among my own children!"

The masochistic elaboration of being unloved was here warded off, first, with pseudo-aggression, second, with a dramatization of the official wish to be loved. The whole procedure was a weak repartee against a reproach of the inner conscience.

Magic gestures are transferrable even to friends. Furthermore, the second layer (that of pseudo-aggression) comes to the fore as time progresses, and the beneficiary, the "friend", is dumbfounded when his erstwhile friend "lets him down" without any discernible reason.

Seventh, friends are often used for the purpose of *"thinking aloud"*, that is, logorrhea. Some people just "like to talk"—the reason for this is in itself complicated[7]. Friends misunderstand this tendency and believe they are being asked for advice. They are not; in so misinterpreting the situation, they become of-

[5]See the writer's "The problem of magic gestures", *Psychiatric Quarterly*, 2, 1945.
[6]Described in the writer's paper, "Four types of neurotic indecisiveness. Part I: Indecisiveness resulting from acting out a 'magic gesture' ", *Psychoanalytic Quarterly*, 9:4. 1940.
[7]See "Logorrhea", *Psychiatric Quarterly*, 1, 1944.

fended that their friend does finally what he wants anyhow. And if the friend does accept the advice, he resents the mingling in his affairs and blames the other later, especially if the "advice" doesn't work.

Eighth, friendship excludes envy only for a short time—in the honeymoon of the beginning. There are people who claim that friendship is possible only between people of the *same social and economic level,* and even then only if there is not the slightest possibility of competition, say, over profession. Hobbies and enmities should coincide, these people claim, nothing else.

Ninth, many a friendship is shattered on the erroneous assumption that it gives one the right to "tell the truth" to his friend. Friendship is only too often a liaison for mutual admiration and narcissistic confirmation. Friends take only a limited dose of the medicine of truth, even given teasingly. A critical friend is inwardly associated with an—enemy.

Tenth, some people choose their friends because these friends represent a *caricature of their own trends,* inwardly warded off because of inner guilt. In a vicarious way these people are amused at the expense of their "impossible" friends. If the inner similarity becomes too obvious and the inner conscience no longer accepts the alibi of being different, the friendship is broken up "without reason".

Eleventh, every friendship involves a complicated exchange of confidences, which, genetically speaking, pertain to *scopophilia* (exhibitionism and voyeurism, "Peeping Tom"). When you tell your friend your "secrets", you exhibit before him. But at the same time, you make him a voyeur of yourself[8]. Every confidence contains, on the other hand, *eo ipso,* the invitation to the other person to tell *his* secret, in other words, to reverse the roles.

This unconscious voyeuristic—exhibitionistic pleasure in friendship is not without danger. In the long run people resent it, because of conscious and unconscious feelings of guilt, if others know too much about them, even though, in a weak moment, they themselves volunteered the "secret". Therefore, "knowing too much" is the starting point of the end of a friendship.

An old oriental adage claims: "Don't tell your friends what could be of help to your enemies." On the other hand, without confidence friendship is just acquaintanceship. This is one of the insolubilities of this relationship.

In the enumeration just given we have been dealing with more or less "normal", that is, not too neurotic people. The moment we take clearcut neurotic reactions into account, the underlying motives for friendship become innumerable: The whole realm of possible neurotic reactions enters the picture. The majority of people are to some degree neurotic. And neurotics use reality just as a hitching post for unconscious *repetition of their infantile patterns.* This might be called a *twelfth unconscious motive for friendship.* To give a hint of the vast possibilities: If a neurotic has an unconscious tendency to prove how "unjustly" he was treated, he will collect friends who exploit him, take financial or social advantage of him, give information to his enemies, and so on. Only a textbook of neuroses can include all of the possible self-constructed "disappointments".

[8]Freud stated that every exhibitionist enjoys, via identification, voyeurism, and vice versa.

Friends and Acquaintances

The difference between friends and acquaintances is precisely characterized, though slightly on the pessimistic side, in W. Somerset Maugham's *Christmas Holiday* (Doubleday Doran & Co., 1939).

> "Charley: 'Men have plenty of faults, but there's a lot of good in them. The more you know people the nicer you find they are. That rather suggests that if you give them a chance they'll meet you halfway.'
>
> "Simon: 'Tosh, my dear boy, tosh. You're a sentimental fool. In the first place, it's not true that people improve as you know them better. They don't. That's why one should have only acquaintances and never make friends. An acquaintance shows you only the best of himself, he's considerate and polite, he conceals his defects behind a mask of social convention; but grow so intimate with him that he throws the mask aside, get to know him so well that he doesn't trouble any longer to pretend; then you'll discover a being of such meanness, of such a trivial nature, of such weakness, of such corruption, that you'd be aghast if you didn't realize that that was his nature and it was just as stupid to condemn him as to condemn the wolf because he ravens or the cobra because he strikes. For the essence of man is egoism . . . the only thing that restrains him is fear.'"

Conclusion

Have we to despair of friendship? Not at all. Friendship is one of the indispensable human relationships. The problem is how to handle the situation. If one doesn't ask too much of his friends and understands that friendship cannot be more than a circumscript safety zone where two lonelinesses temporarily meet, everything goes well. Friendship is no repetition of the childhood paradise, where everyone lives on the basis of the fantasy of omnipotence and exclusive love. Friendship is for adult people, who, if neurosis doesn't interfere, know that psychic expenditures for other people are more than limited.

251 CENTRAL PARK WEST

Jean Louis Alibert

Jean Louis Alibert is regarded today as the father of French dermatology. He was born on May 2, 1768, in the city of Villefranche. He entered the School of Medicine at Paris in 1796, and in 1799 he received his degree in medicine. Almost at once he began to evince a deep interest in dermatology. In 1806, seven years after his graduation, he published his first essay on diseases of the skin. Four years later appeared his book *Description des Maladies de la Peau,* which received favorable notice. In 1815, on the recommendation of Portal, Alibert became consulting physician to Louis XVIII. In 1818 he received the title of first physician-in-ordinary to the King, whom he served devotedly until that monarch's death. Charles X, as a reward for his services, made him a Baron by letters patent on the sixth of November, 1828.

While on a visit to England, Alibert became converted to Willan's classification of skin diseases. This was in direct opposition to his own, but he accepted the English dermatologist's classification as the more satisfactory. Alibert always was the first to admit he was wrong; he had no fear to proclaim the truth even if it brought him in conflict with his superiors. He died on November 3, 1838. Alibert, with Fournier, is regarded as the founder of dermatology in France.—*Urologic and Cutaneous Review,* September 1945.

Editorials

Medicine in a Changing World Order

For three years past the New York Academy of Medicine through its Committee on Medicine and the Changing Order has been studying the distribution of medical care to all the people so that the old slogan concerning the "best medical care to the rich and to the poor, with none for the middle class" shall no longer have any basis in fact. There never has been any great amount of actual truth in this statement. It is more in the nature of a "wisecrack"; for it was probably first voiced by a citizen of some metropolis who had little or no knowledge of the country as a whole.

No doubt, President Truman has heard this bromide many times, and it has brought to his mind some thought of relief or, at least, change. He set down in his message to Congress and to the American people, five postulates which contain much of value. In general these are acceptable and even are endorsed by the leaders of the medical profession; all except the fourth, which is received with many misgivings and doubts.

The first point emphasizes the need for construction of new hospitals and related facilities. This is good, but what about trained personnel, equipment and supervision—in general a going set-up? Expansion of public health, maternal and child health service was the second point. This is not new ground. It has been tilled, partially at least, for forty years. There are some twenty thousand local health agencies in the United States, and an indefinite number of official or nonofficial and private agencies. These are on a running basis, but need coordination and less overlapping. Education and research are mentioned in the President's third proposal. Here governmental aid would be welcome if it will foster and support but will not aim to *direct* these valued elements in medicine. Loss of wages resulting from sickness and accidents are set down by the President in his fifth postulate as in need of coverage, but means and methods are yet to be devised.

It was, of course, impossible for the President to give a complete plan of organization for all of these propositions, but in the fifth he went to some length regarding national compulsory health insurance, a subject than which there is none more controversial among men who are charged with the study of medical economics in relation to both professional and public welfare. Payment for medical services through insurance is only a small segment of the general problem. Insurance cannot raise the quality of medical service; on the other hand, it may decrease such quality. To be sure a larger number of people will be under medical care, but it is in human nature to give only just so much for so much. Physicians, being human, are likely to follow this ancient rule. The patient will demand more attention than he deserves or needs, and the doctor will give it in superabundance but in a superficial manner. It is the "number of calls" which will count. We have always had that to deal with in socalled "compensation cases."

The Committee wishing to offer something constructive has advanced certain propositions. First, voluntary, no-profit insurance should be given a free hand. It may be desirable to conduct a "survey", a working plan of action in providing medical service for low income families under private beneficence, and where this weakens to have it buttressed by federal grants-in-aid or State aids. It may even be desirable to experiment in certain localities with government controlled compulsory insurance for comparison with voluntary procedure. This as a try out, to be discontinued when the experiment is concluded to make room for a more permanent set up.

Second, the Committee recommends revision in medical practice with especial reference to encouragement of the group idea in connection with high-class hospital care when needed. This is attractive to young physicians because of the "integration" of findings, the check up of laboratory against clinical "facts", autopsy studies, tissues analyses, etc.

Another suggestion is that medical schools be allowed more cooperation with teaching hospitals. Teaching and research begin at the bedside, and from this basic groundwork books are written and the entire fabric of "medicine" is established. Great medical centers already have this in full blossom, but in the smaller cities, there is still insufficient cooperation in this respect.

Preventive medicine may be considered under a fourth heading. It is not only good economics but imperative common sense to prevent illness through every available means of education, precept and example, enforced, as necessary, by law. Prevention of dissemination of disease by contact or through respired air is highly important, but is still at present well nigh impossible in certain aspects—colds, for instance. Public education, through lectures, the printed word, and a knowledge of what happens when violations occur, is a direct and potent though slow method. It might be speeded up through state or federal aid.

We need more study and experimentation at local levels, so that communities of whatever size may be brought to a sense of conscious responsibility. The final report of the Committee, not yet ready, will aim to present constructive plans for this consummation.

In conclusion, the Committee says: "It is far better

to proceed in a somewhat slower but more orderly manner than to expose the nation to risks as yet unmeasurable, which immediate adoption of national compulsory medical insurance would entail." This is an enormous subject and it has enormous opportunities for good to the greatest number, or for ill advised and impossible schemes which might wreck the present excellent relationship of public and profession. Too much paternalism in this instance would be a national danger to both.

Pseudo-Positive Serological Reactions in Syphilis

The Wassermann test was hailed and regarded by the medical profession as a great advance in the diagnosis of syphilis. Shortly thereafter, various laboratory workers and diagnosticians began to report positive tests in patients who were not afflicted with syphilis by any standard which had been set up previously. Several modifications of this test were used as "controls", but the answers were often conflicting. Kahn, Kline, Mazzini, Kolmer, and many others sought to perfect and make more certain the laboratory diagnosis of syphilis. It was a question in doubtful cases whether one should accept a two or three plus reaction as "positive" and undertake antisyphilitic medication, or to ignore such reports and indulge in watchful waiting. Before Wassermann or Ehrlich, the older syphilographers advised waiting in every case of suspected syphilis until secondary signs and symptoms appeared, since these were definite and not likely to be confused with signs or symptoms of other diseases. This was, of course, all to the bad, since it permitted the body to become saturated with spirochetes before any effort was made to destroy them. We were told never under any conditions to cauterize a "sore on the penis" and to wait for the rash and spots in the mouth and throat. All of that belongs to the history of medicine, and it occurred years before there was much interest in preventive measures to insure good health.

It is somewhat of a question whether in these latter years, we have not depended too much on laboratory diagnosis, especially when the report has read "positive" followed by the degree of three or four plus. Many clinicians would not accept two plus as confirming a diagnosis, but willingly accepted the stronger variants. In a paper entitled "Nonspecific Reactions in Routine Blood Testing for Syphilis", Stokes, Boerner, Hitchens and Nemser (*J.A.M.A.*, Jan. 12, 1946), working for the Committee on Medical Research and the Venereal Disease Subcommittee of the National Research Council, endeavor to summarize the results of many studies made in Red Cross examination of blood donors, individuals applying for marriage license, boards of health data, etc. The variations were so great as to render definite determination extremely difficult if not impossible. For example, of 210,261 blood donor specimens taken during 1944, only 489 or 0.23 percent were positive! This seems out of all reason, and probably is not to be accepted, but certain extenuating factors help to explain the results. There were no donors under twenty; most were females; there were few negroes (2,579 statistically); and known sick persons or syphilitics were excluded. Of seventy-nine unselected donors with positive tests, 40.5 percent were finally adjudged to be syphilitic by a reviewing board. Decisions were withheld for three months or longer.

A curious conclusion is that serological tests should be "run in summer" because of seasonal infection influence! History and physical examination contributed little to diagnosis, since "testimony" is often unreliable, and physical signs may be misinterpreted. Neurosyphilis and congenital types were often "latent" or indeterminable by ordinary means. One often *has* to depend on serology, but the authors admit that "large numbers of persons have been treated for nonexistent syphilitic infection." A recent respiratory infection may give a nonspecific positive serum. That is discouraging in view of prevalent infections of the airways at all times of the year, but especially in winter and spring. Dr. Boerner has devised a "classification" which is essentially an interpretation of highly sensitive tests simultaneously performed for the detection of flocculent and complement fixing reagin. The details are not yet published, but will probably be reported in a future issue of the *American Journal of Clinical Pathology*.

Even with all this background of study, investigation and collating of "facts", one may still be doubtful of the diagnosis of syphilis in a given case. It then becomes a question of advising a "provocative Wassermann" and choosing a course of treatment, or of waiting to see if there is any improvement following the old-fashioned therapeutic test of administering "mixed treatment". This is not diagnostic, but it does bring relief at times and satisfies the patient, which is a desideratum. All this ought to be explained either to the patient or his nearest relative.

Colchicum

After all, the remedies derived from the vegetable kingdom are not to be despised, in spite of the flood of new drugs which pour out almost every day. Also, some of the old medicines are regarded still as valuable, and among these colchium may be mentioned.

The history of colchicum is interesting. It is one of the first drugs of which there is a record but, although it was known and used by the ancients, it had a sinister reputation. In ancient Egypt it was named the blood of Thoth, whom the Greeks called Hermes and the

Romans, Mercury. It took the name colchicum from Colchis where lived the notorious Medea, who is said to have discovered its poisonous properties. Alexander of Tralles and Paul of Algina, in the sixth and seventh centuries, recommended a species of Colchicum hermodactylus for gout. The Arab physicians employed a similar remedy for gout as did Ambroise Paré and others.

It has been only in comparatively recent times that the value of colchicum in acute gout has been recognized. It was owing to the success of a proprietary preparation, *eau médecinale d'Husson,* in the eighteenth century, that its therapeutic values in the treatment of gout became known and appreciated by the medical profession. It was in the nature of a specific for the old classical gout of our hard-drinking forefathers. It will cure acute gout but will not avert an attack. Its action in acute gout has never been explained clearly. It is prepared from the ripe seeds and corms of Colchicum autumnale, or meadows saffron. Acute gout occurs less frequently now than it did even fifty years ago, but it still manifests itself in various forms.

News Items

Harvey Lecture.—Dr. Max Delbruck, assistant professor of physics, Vanderbilt University, delivered the fourth Harvey Lecture at the New York Academy of Medicine on Thursday evening, January 17th. His subject was "Experiments with bacteriophages".

American Roentgen Ray Society.—At the recent annual meeting of this society, Dr. Ross Golden, New York, was inducted into the presidency, and other officers were elected as follows: Dr. Raymond C. Beeler, Indianapolis, president-elect; Dr. Francis F. Borzell, Philadelphia, and Dr. Ellis B. Rader, vice-presidents; Dr. Harold D. Kerr, Iowa City, secretary, and Dr. James B. Edwards, Leonia, N. J., treasurer. The next annual meeting will be held in Cincinnati, September 17 to 20, 1946.

International College of Surgeons.—The fifth International Assembly of the International College of Surgeons will be held in Lima, Peru, March 25-27, under the general chairmanship of Dr. Francisco Graña. General information regarding this meeting may be obtained by writing to the Secretary General of the College, Dr. Max Thorek, 850 Irving Park Road, Chicago, and those who wish to present papers should communicate with Dr. A. A. Berg, 10 East Seventy-third Street, New York.

John Scott Awards.—Dr. Edwin J. Cohn, department of physical chemistry, Harvard Medical School, and Dr. Ernest W. Goodpasture, professor of pathology, Vanderbilt University, have received the John Scott Awards for 1945 in recognition of their work in research. Dr. Cohn developed a substitute for dried blood plasma, and Dr. Goodpasture discovered a method for the cultivation of viruses. Both received bronze medals and $1,000 in cash awards.

Economics in Medicine.—Dr. Dean A. Clark, of the U. S. Public Health Service, Washington, D. C., delivered the George R. Siedenburg Memorial Lecture at the New York Academy of Medicine, on Thursday evening, January 24th. His subject was "Economics in medicine" and he presented alternative and multiple solutions to the problems of medical costs.

Dr. Walter Reed Elected to Hall of Fame.—The election of Dr. Walter Reed, conqueror of yellow fever, to the Hall of Fame for Great Americans, on the campus of New York University, was announced recently. He is the first member of the medical profession to be chosen because of his contributions to medical knowledge. He is also the first alumnus of the New York University College of Medicine to receive this distinction. Of one hundred and thirty famous Americans nominated by the public for the tenth quinquennial election eight were physicians and surgeons, including two other alumni of the University's College of Medicine, Dr. William J. H. Bellamy and Dr. William C. Gorgas.

New York Cardiological Society.—At a meeting of this society, held Wednesday evening, January 9th, Dr. Saul S. Samuels, for the Committee on Scientific Progress, presented a review of recent advances in peripheral vascular disease; and Dr. Philip Reichert, for the Committee on Heart and Trauma, presented an outline of the statistical investigation. The paper of the evening was read by Dr. Louis N. Katz, director of cardiovascular research, Michael Reese Hospital, and professorial lecturer in physiology, University of Chicago. His subject was "Some recent observations on the diagnosis and treatment of coronary disease". A general discussion followed.

Friday Afternoon Lectures.—During the month of March, the following lectures in the twentieth series of Friday afternoon lectures will be given at the New York Academy of Medicine:

March 1: Disorders of the spleen with special reference to those amenable to surgical therapy, by Dr. Robert H. E. Elliott, Jr., instructor in surgery, College of Physicians and Surgeons, Columbia University;

March 8: The indications for surgery in the treatment of gastric and duodenal ulcers, by Dr. J. William Hinton, visiting surgeon, Bellevue Hospital;

March 15: Rehabilitation of the psychiatric convalescent, by Dr. Lawrence S. Kubie, associate in neurology, College of Physicians and Surgeons, Columbia University;

March 22: Fibrous dysplasia of bone, by Dr. Henry L. Jaffe, director of laboratories, Hospital for Joint Diseases;

March 29: Treatment of the neuroses by the internist, by Dr. Dana W. Atchley, professor of clinical medicine, College of Physicians and Surgeons, Columbia University.

Medicine's Tomorrow.—At a dinner meeting held in New York on Tuesday evening, January 22d, sponsored by the chancellor, the council and the faculty of medicine of New York University, a symposium on the state of the nation's health was presented. The general theme of the symposium was "Medicine's Tomorrow"—the future of medicine in relation to every man's health. Dr. Harry Woodburn Chase, chancellor of the University, presided. Dr. A. Newton Richards, vice-president of the University of Pennsylvania, delivered an address on the "Impact of war on medicine"; Dr. Dean A. Clark, medical director of the Health Insurance Plan of Greater New York, spoke on "Health—the people's business"; and Dr. Alan Gregg, director of medical sciences of the Rockefeller Foundation, discussed the "Mission of a medical school".

Clinical Society of Reconstruction Hospital.—A meeting of this society will be held at the Hospital on Wednesday evening, February 20th, with Dr. David Goldblatt as chairman. After an executive session, interesting cases will be presented by Dr. Walter D. Ludlum, Jr., Dr. Goldblatt, and Dr. Henry H. Ritter. These cases will include comminuted fractures, fracture-dislocation of shoulder, rupture of biceps, acromioclavicular separation, and subacromial bursitis.

Symposium on Hepatic Disorders.—At a stated meeting of the New York Academy of Medicine, held on Thursday evening, February 7th, the scientific program was arranged by the Section of Medicine and consisted of a symposium on hepatic disorders. Dr. Franklin M. Hanger, associate professor of medicine, College of Physicians and Surgeons, read a paper on "The uses and limitations of liver-function tests". A paper on "Indications for shunting operations determined by pathological findings" was presented by Dr. Allen O. Whipple, Valentine Mott professor of surgery, College of Physicians and Surgeons, and Dr. Arthur H. Blakemore, assistant professor of clinical surgery, College of Physicians and Surgeons.

International Spanish Speaking Association of Physicians.—The nineteenth annual meeting of this association was held in New York, Wednesday, January 23rd. The scientific program consisted of a symposium on atomic energy, rays and cancer. Dr. J. M. Gershberg delivered the annual address of the president and the following papers were presented: A tribute to the discoverer of x rays, by Gottwald Schwarz, M.D., University of Vienna; Artificial radio activity, by Edith Quimby, Ph.D., Presbyterian Hospital; X rays, by R. E. Herendeen, M.D., Memorial Hospital; Radium rays, by Ira Kaplan, M.D., Bellevue Hospital; Belatron rays, by Henry Semat, Ph.D., City College, New York; and Atomic energy in medicine, by R. D. Evans, Ph.D., Boston. Preceding the presentation and discussion of these papers, an executive session was held for the consideration of official business, which included the annual reports of the chairman of the Board of Directors, the general secretary and the general treasurer.

Gastroenterological Award.—The National Gastroenterological Association announces the establishment of an annual cash prize award of $100.00 and a certificate of merit for the best unpublished contribution on gastroenterology or allied subjects. Certificates will also be awarded those physicians whose contributions are deemed worthy. Contestants residing in the United States must be members of the American Medical Association, and those residing in foreign countries must be members of a similar organization in their own country. The winning contribution will be selected by a board of impartial judges and the award made at the annual meeting of the National Gastroenterological Association to be held in New York on Thursday evening, June 20, 1946. The decision of the judges will be final. The association reserves the exclusive right of first publishing the winning contribution, and those receiving certificates of merit, in its official publication, *The Review of Gastroenterology*. All entries must be received not later than May 1, 1946. Further information may be obtained by writing to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

General Lull Joins Staff of A.M.A.—Major General George F. Lull Deputy Surgeon General of the Army, whose notable record in that capacity won him the Distinguished Service Medal, has retired from the Army after thirty-three years of service with the Medical Corps and has been appointed secretary and general manager of the American Medical Association. He will take up his new duties officially in July, when the retirement of Dr. Olin West, the present secretary and general manager, becomes effective.

Urology Award.—The American Urological Association offers an annual award, not to exceed $500, for an essay (or essays) on the result of some specific clinical or laboratory research in urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All interested should write the secretary, for full particulars. The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, to be held in Cincinnati, Ohio, July 22-25, 1946. Essays must be in the hands of the secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tenn., on or before July 1, 1946.

New Journal of Medical History.—The first issue of the *Journal of the History of Medicine and Allied Sciences* was scheduled to appear in January. It is published by Henry Schuman, 20 East Seventieth Street, New York. The editorial board consists of Dr. George Rosen, editor, Dr. Erwin H. Ackerknecht, Dr. Max H. Fisch, Dr. John F. Fulton and Dr. Josiah C. Trent. Foreign representation has been arranged through a board of consulting editors. It is the publisher's hope that a knowledge of the past achievements of medicine will be of assistance to physicians in their everyday practice, and that the new publication will provide pleasure and mental stimulation to those who are interested in medical history.

Personal.—Dr. G. W. Fox, professor of physics at Iowa State College, has been appointed technical adviser to General Douglas MacArthur, and has gone to Japan to make a study of scientific activities in that country, with a view to determine whether or not they should be continued.

Dr. Max Einhorn, New York, was recently elected an honorary member of the *Société Gastroenterologique*, of Belgium.

Dr. James E. Perkins, former director of the division of communicable diseases, New York State Department of Health, has been appointed Deputy State Commissioner of Health to succeed Dr. Paul B. Brooks whose retirement became effective January 1st.

Dr. W. Rex Crawford has been appointed director of the Office of Inter-American Activities recently created by the University of Pennsylvania.

Dr. John H. Lawrence has been appointed head of the Division of Medical Physics recently established at the University of California.

Dr. Loyal Davis, Chicago, delivered the annual Robert J. Terry lecture before the St. Louis Medical Society on December 18th. "Experimental and clinical investigations on surgery of peripheral nerve injuries" was the subject of the lecture.

Book Reviews

Physical Therapy

Electrotherapy and Light Therapy. With the essentials of Hydrotherapy and Mechanotherapy. By RICHARD KOVACS, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. Fifth edition, thoroughly revised. Illustrated with 352 engravings and a color plate. Philadelphia: Lea & Febiger, 1945. Pp. 694. Price $8.50.

The five successive editions of this well-known work testify to the constant widening of the field of physical therapy. Formerly electricity and heat were the chief agents. Now we have electronics, electrodiagnosis, ion transfer, ultraviolet radiation, hydrotherapy, mechanotherapy, and other "modalities". In 1944, the American Medical Association gave a new impetus to the specialty by changing the phrase Council on Physical Therapy to Council on Physical Medicine, which was defined as "the employment of the physical and other properties of light, heat, cold, water, electricity, massage, manipulation, exercise and mechanical devices for physical and occupational therapy in the diagnosis and treatment of disease." Also in 1944, Bernard Baruch surveyed the field and founded the Baruch Committee on Physical Medicine with a gift of one million dollars for education and research. It is good to know that, out of both World Wars, the need for physical agents became so great that necessity produced new and helpful methods of rehabilitation. Much of this groundwork was laid by the Army and Navy hospitals.

All of this led to a need for revision of Kovacs' book. So many new terms have been introduced that some fourteen pages have been used for a "Glossary". Chapter 32, on proctology, has been written by Dr. R. V. Gorsch, who is professor of that specialty in the New York Polyclinic, while Dr. W. W. Morrison who holds the chair of otolaryngology in the same institution has written chapter 34 which describes the use of physical agents in the treatment of ear, nose and throat conditions. The publishers have done an excellent job of bookmaking in spite of paper "shortage". Paper, type and general set-up are all first class.

Amputation Prosthesis

Amputation Prosthesis. Anatomical and Physiological Considerations, with principles of alignment and fitting designed for the surgeon and the limb manufacturer. By ATHA THOMAS, M.D., associate professor of surgery (orthopedics), University of Colorado School of Medicine, and CHESTER C. HADDAN. With 207 illustrations. Philadelphia, London, and Montreal: J. B. Lippincott Co., 1945. Pp. 305. Price $8.00.

Dr. Thomas is associate professor of surgery (orthopedics) in the University of Colorado School of Medicine. He has been working for a long time to see that the amputee has as fine a prosthesis as it is possible to invent. To accomplish this a "new approach" was made in cooperating with a limb maker who also was much more than a mere "salesman." Recently, the newspapers have published many letters and comments from soldiers who were vehemently dissatisfied with their new "parts." The matter came before a special Committee of Congress, but just what was done is not quite clear. The surgeon has sometimes been at fault when in the hurry of operating he has failed to observe the conditions necessary for a limb stump which can support an artificial arm, hand, leg or foot. A painful stump will not tolerate any encumbrance. Proper covering of the nerves will help cushion them against pressure. There have been, too, exaggerated reports of the "wonders" wrought by fancy jointed parts which are supposed to have everything but actual intelligence. The limbmakers say that the simpler the mechanical apparatus, the better practical value it has. It is largely a question of "alignment and fitting". One must also recognize the mental rebellion against "wooden" legs, etc. The amputee has to be encouraged and taught and aided in every possible way, especially by those in like situations who can "show the goods," that is, who can demonstrate the effectiveness of their prosthesis. This has been the rule in all rehabilitation centers in this country where the wounded of World War II have been cared for. . . The authors have written an excellent book on an extremely important subject.

The Singing Voice

Your Voice. Applied Science and Vocal Art. By DOUGLAS STANLEY, M.S., Mus.D., fellow of the American Association for the Advancement of Science. Illustrated. New York, and Chicago: Pitman Publishing Corp., 1945. Pp. 306. Price $4.50.

It must give great sadistic satisfaction to anybody who enjoys a climb into his ivory tower to throw things at the gods below. Mr. Stanley is in that delightful position; for he is a successful teacher of singing (financially), and through his studies in acoustics, and having a bowing acquaintance with the anatomy and physiology of so much of the head and neck as concerns voice, he strikes out both at the living and the dead. Of the living he says (p. 257) . . . "most performers of today sing without any real sense of musical values at all." Of the dead he opines: "Lilli Lehmann was for many years the world's most successful teacher, financially. She knew nothing of science and had almost lost her voice when she started to teach. In her book on singing she propounded theories which . . . are preposterous nonsense." There is much more about this singer who was one of the greatest of her day . . . "But it remained for Jean de Reszke—the great French tenor—to strike the final blow which has been the main cause of the virtual elimination of all great voices from the world today." Some fifty years ago both brothers, Edouard and Jean de Reszke were "tops" at the Metropolitan, and they labored intensely and incessantly to bring their art to the highest possible degree of perfection. Mr. Stanley would have us believe not only that they labored in vain, but are the cause of much of the bad singing now in vogue. One wonders what they would do or say were they to visit a night club or listen in on the radio in 1945? If they were convinced that they "started" the "torch singers" or the "blues", they would probably wish to take a high dive from the George Washington Bridge.

Mr. Stanley says that the nasal sinuses have nothing to do with resonance, because a resonant body must be an elastic body or words to that effect. One wonders whether he finds any resonance in a Stradivarius! Or may be it *does* change shape and size when we are not looking! Did one ever hear a change in resonance when the nasal sinuses were blocked by "a cold"?

Peripheral Circulation

Vascular Responses in the Extremities of Man in Health and Disease. By DAVID I. ABRAMSON, M.D., F.A.C.P., associate in charge of cardiovascular research, May Institute for Medical Research of the Jewish Hospital, and instructor in pharmacology, University of Cincinnati College of medicine. Illustrated. Chicago: University of Chicago Press, 1944. Pp. 412. Price $5.00.

This is a study of the physiology of the peripheral circulation. There are various causes for changes in the surface blood flow, some are of bacterial origin, some traumatic, some "idiopathic", which means that we are still ignorant. Phlebitis is an important and much neglected subject. Save for "milk leg", not much interest has been shown in it by the average practitioner of medicine. Some enthusiasts, notably Otto Meyer, an American physician who has written much in the foreign literature (German), are convinced that focal infections are the chief cause, and Meyer pays especial attention to tonsils and teeth as the sources of bacterial phlebitis. It is entirely plausible that leg ulcers are caused by improper circulation of the venous blood, secondary to bacterial action in the veins. In this study, experiments on animals have been secondary to the data obtained from observations on human subjects, which seems quite as it should be. Perhaps the most important section of the book deals with the clinical application of blood flow studies. Changes in peripheral circulation due to systemic disorders or those seemingly of peripheral origin are described, based on the venous occlusion plethysmographic method which is well elucidated in the text. This book supplies the ground-work for further investigation along the lines laid down by the author. In this sense it is an important contribution. References at the end of each chapter seem to be unusually complete, although some of them are rather far afield from the essentials of therapeusis which is, of course, the main desideratum.

Shigella Infections

Bacillary Dysentery, Colitis and Enteritis. By JOSEPH FELSEN, B.A., M.D., director of medical research, Bronx Hospital, New York. Illustrated. Philadelphia and London: W. B. Saunders Co., 1945. Pp. 618. Price $6.00.

Infections with the dysentery bacilli have been among the commonest causes of debility and death since time immemorial. They have weakened armies, swept through civilian communities, been responsible for high infant mortality and even caused epidemics among hospital personnel. Their prevention has often been neglected because of the difficulty of controlling the sources and vehicles of transmission.

In recent years, however, considerable advance has been made in understanding and treating these infections. Classification of strains of Shigella has been improved, new culture media and techniques of isolating strains have been introduced, subclinical and mild infections have been better recognized and effective chemotherapeutic agents have been discovered.

Chronic intestinal infections with the dysentery bacilli have long been recognized, but the association of these infections with certain other intestinal conditions, notably chronic ulcerative colitis and regional ileitis, are still under debate. It is generally conceded that some cases of these conditions have a bacillary dysentery background, but the relative importance of such a background can be determined only by the most thorough clinical and laboratory study and by following cases of bacillary dysentery over a period of years to detect chronic manifestations.

Dr. Felsen has devoted many years to the study and control of Shigella infections. He has dealt with epidemics and has followed cases into their late manifestations. He has produced a motion picture which is widely used for educational purposes. He has established the "International Dysentery Registry" as a means of promoting coordinated study and preventive activity. He now presents the first comprehensive monograph on the subject to be published in the United States. It records his own studies and points of view as well as the work of other authorities and makes available for the first time the correlated investigations of the pathologist and the clinician in bacillary dysentery enteritis and colitis. This work should not only contribute significantly to better diagnosis, treatment and prevention, but should also provoke discussion and research which will settle some of the unsolved problems of Shigella infections.

Senility

Ageing and Degenerative Diseases. Edited by ROBERT A. MOORE, School of Medicine, Washington University. Volume XI of Biological Symposia, a series of volumes devoted to current symposia in the field of biology. With numerous illustrations. Lancaster, Pa.: The Jaques Cattell Press, 1945. Pp. 242. Price $3.00.

This is the eleventh volume in a series which deals with "Biological Symposia". It is a symposium entered into by some seventeen scientists at St. Louis during March 1944 under the joint sponsorship of the Research Unit of the St. Louis City Infirmary, and the Washington University School of Medicine. It is pretty generally known that the life span of man has lengthened during the past fifty years. The expectancy of a white male at birth in 1901 was forty-eight plus years; in 1939 it was sixty-two plus! Net gain is fourteen plus years during the thirty-eight years that passed. In 1900, persons aged sixty-five made up only four and one-tenth percent of the population; today they comprise over seven percent, and by 1980 the percentage is estimated at fourteen and four-tenths for those sixty-five and over. There is an old aphorism to the effect that "All men would live long, but no man would be old". This is because old age brings too many discomforts, both physical and mental. Longevity is a phenomenon about which its possessor knows nothing,—he cannot explain why he lives so long.

Senility is a problem for medicine and all allied subjects, such as biological chemistry, bacteriology and endocrinology. Not much is known as yet about it, save the objective signs. Hidden causes of degenerative conditions remain for the most part still hidden. Dr. Stieglitz, who has made geriatrics his lifelong study, admits this freely in his chapter on "Difficulties in the Clinical Recognition of Degenerative Diseases". The major theme of the symposium centered around arteriosclerosis, chiefly because diseases of the heart and blood vessels have such high mortality in aged persons. Dr. Irvine H. Page working in the Lilly Laboratories thinks that "lipids" encroaching and dwelling upon the intima cause proliferation and sclerosis. He adduces evidence to make his theory plausible. Other theories set by other investigators are also described. All this is interesting and important, but still highly speculative. We see and experience "ageing" but we know little about its "secrets".

Critique

Fatigue and Mental Illness: R. D. Gillespie (*Guy's Hosp. Reports,* Jan. 1929, p. 92) once discussed the hypothesis that fatigue is at the bottom of mental illness. If so, what is it? Did many mental diseases depend upon fatigue, their symptoms being the same? Gillespie knew no objective clinical test to substantiate this theory. Low blood pressure and a fast pulse rate were not constant findings in nervous exhaustion. The vital capacity, the metabolic rate, the reaction to autonomic drugs, showed no constant abnormality. It was profitless to ascertain the red blood cell count and hemoglobin.

Many patients with severe primary anemia are unfatigued. Taranowitsch (*Biochem. Zeit.* 1928, 461) noted high organic phosphorus in the urine of the fatigued. A change of ratio of organic to inorganic phosphorus could be significant, when it is remembered that phosphatides and lipoids play an important part in nervous histology and metabolism. Others have noted changes in the adrenal secretion. Gillespie did not think that lack of sleep or focal infection bore more than an associative relationship to the generalized fatigue feeling. The subject is involved. Even the gonads may have part in the fatigue syndrome, and sex emotion too, when concentrated and excessive.

Wohler's Synthesis of Urea: According to F. G. Hopkins (*Biochemical Jour.* 22:1341, 1929) Wöhler's synthesis of urea did not attract any attention among the philosophers and the intellectuals of the day. They ignored the slap, if any, that the discovery gave to the doctrine of vitalism. The announcement was made in 1828 (*Poggendorff's Annal.* Bd. 12, 243) and about the same time Hennel synthesized ethyl alcohol (*Phil. Trans.* 1828, 356). Wöhler himself seemed to scent the fact that he might possibly have upset an applecart, but he was conservative in speaking of his discovery and merely used the word "noteworthy!"

Berzelius did not find anything of extraordinary significance in the discovery and, in fact, did not trouble to answer the discoverer's question as to whether he had done something great, when Wöhler wrote his former chief that he had produced an organic substance, urea, without using a kidney in the process. Liebig stuck to the idea of vital force at least fifteen years after he knew all about what Wöhler had done. Only late in life did he begin to suggest that the necessity of a vital force to make molecules react with one another to form organic compounds was perhaps unjustifiable.

Dumas, however, dropped vitalism soon after he met Wöhler in Paris. Chemical texts published subsequent to announcement of the discovery did not note it, and remained studiously vitalistic even later when they discussed the matter in detail. The rigid dualistic theory of chemical affinity was then dominant in all minds and no factual discovery could immediately undermine it. According to this theory, the knitting together of complex organic substances from molecules required the intervention of vital power. So it was generally assumed that Wöhler must have captured the vital power in his laboratory.

Cost of Medical Care: According to W. S. Rankin (*Amer. Jour. Pub. Health,* April 1929) one-fortieth of our population was constantly ill in 1929, and the total of medical service was $2,560,000,000 annually. This was $20.83 per capita or $100 per family per year. The Bureau of Labor Statistics then estimated that the average wage earner's family paid $60.39 for medical treatment per year. According to the Department of Agriculture the average family paid $61.60 a year. A large insurance company said the average for city white collar workers was $80.00.

Universities in Michigan, Minnesota, and California provided overall medical care for students at from $9.00 to $12.00 each per year. At Roanoke Rapids, North Carolina, five cotton mills and one paper mill had complete and inclusive hospital and medical service, with home visits and nursing, at $9.00 per capita or $23.60 per family per year.

Today various countywide medical set-ups subsidized by the Farm Security Administration provide overall medical and dental coverage for about $60.00 to $72.00 per family of five per year, this under wartime conditions of high costs. The countywide set-up in Taos, New Mexico, is of especial interest because the service there revolves around well equipped clinics, used as medical centers; doctors, dentists, nurses, and others are paid full-time salaries; and the entire county is rural. Nearly 6,500 of the total wartime population of 14,500 of that county depend upon the Taos County Cooperative Medical Association, backed by an FSA grant, for complete medical and dental care. Naturally the inclusion of dentistry in the coverage increases per capita costs but it is most necessary.

Corporate Medicine: The *Chicago Journal of Commerce,* April 11 and April 15, 1929, was editorially agitated over the economic problems faced by physicians. The editorials were entitled "Fairness to the Doctors" and "Doctors and the Public". From the latter this sentence is exhumed: "What physicians dread is the possible evolution of the average physician into an employee of a large medical corporation, drawing his salary and performing the chores assigned to him."

A good many things have happened since that time. Social Security recently issued a fairly hefty booklet which merely listed the prepaid medical groups operating in the United States. In many instances, however, large industrial corporations simply invested in complete medical coverage of their employees, and the unemployed dependents thereof, and charged the whole up to costs of operation.

In scores of instances physicians, nurses, dentists and ancillary lay help are all employed on straight salary, and nobody appears to object. Sometimes there is free choice of physicians within the confines of the group; other groups regard free choice of physicians by medically ignorant laymen as unscientific and ill-advised and, as in the case of the Mayo Clinic, do not permit it. In any case, patients undergo sufficiently humanitarian treatment to satisfy them and the salaried staff usually has advantages of time off, sick leave, annual vacations, sabbatical years, and regular hours which more than make up for the competitive battle they fight to make a living when on their own.

—THE CRITIC

MEDICAL RECORD

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FEBRUARY 1946

Medicolegal Notes

Exclusion of Heart Trouble Originating Within Six Months from Issue of Life Policy

A controversy was recently submitted to the New York Appellate Division in the form of an action by an insured to recover total disability payments under an accident and health policy issued by the defendant insurance company. The facts were agreed on according to a statement thereof by the parties.

The policy was issued to the plaintiff in New York on December 15, 1941. On March 29, 1942, when the policy had been in force for less than six months, the plaintiff lifted and pushed an automobile and thereafter suffered an acute pain diagnosed on March 30th, as "acute coronary thrombosis." A physician stated then that in his opinion the exertion of lifting and pushing the automobile had precipitated the condition. By reason of this the plaintiff became and remained totally disabled.

The policy insured against bodily injuries which had been sustained "through purely accidental means," subject to certain limitations, or "additional provisions" of which the only one relevant is the final sentence in paragraph (a) and reads, "Disability resulting from tuberculosis or heart trouble shall be covered only if the disease originates after the policy has been in continuous force for the six preceding months."

The parties agreed on a definition of "acute coronary thrombosis" as "the formation of a clot in a branch of the coronary arteries which supply blood to the heart muscle, resulting in obstruction of the artery." They agreed that arteriosclerosis was present in the coronary arteries when coronary thrombosis occurred. They agreed in defining "arteriosclerosis" as "a thickening of the coats of the arteries, with inflammatory degenerative changes." Because of this condition of the heart artery, they agreed, a blood clot is formed which blocks the supply of blood to the portion of the heart supplied by that artery. They also stipulated that arteriosclerosis was present in every person over the age of thirty-five years, but was present in greater amount than normal at the place in the artery where the blood clot formed; but that the mere presence of arteriosclerosis alone without the presence of some other contributing factors, which vary from case to case, would not cause coronary thrombosis.

The insured claimed that the above quoted clause in the exclusion paragraph (a) does not apply to "heart trouble" caused by accidental means, but to heart trouble caused by illness induced by other than accidental means; that his condition was caused by accident, and that the word "disease" in clause (a) is used only to describe illness not caused by accidental means. The insurance company contended, 1, that the policy did not insure the plaintiff against disability resulting from heart trouble unless such heart trouble should originate after the policy has been in force for six months; and 2, that clause (a) excludes disability from heart trouble whether caused by accident or otherwise if it occurs before said six months.

The Appellate Division entered judgment for the defendant insurance company for these reasons: The limitation in clause (a) includes by its terms a limitation of the whole policy coverage. It begins, the court said, "This policy does not cover death disability or other loss. . ." It then mentions, in two sentences in the same paragraph, five things not covered. The first four are in this last quoted sentence. The fifth, the final sentence in paragraph (a) first above quoted, beginning "Disability resulting from tuberculosis or heart trouble," forms a new sentence in the paragraph providing that "heart trouble shall be covered only if the disease originates after the policy has been in continuous force for the six preceding months".

"The clear meaning of this clause is," the court held, "that any disability resulting from heart trouble, regardless of how the heart trouble may have been caused, is excluded from coverage unless it originates after the policy has been six months in force. As it is stipulated that the plaintiff's heart trouble occurred before the policy had been in force for six months, the plaintiff is not entitled to the total disability payments."

The court found it unnecessary on the facts shown to determine whether plaintiff's condition resulted through purely accidental means. Greenberg vs. Mutual Ben. Health & Acc. Ass'n., Omaha, 267 App. Div. 186, 45 N.Y.S. 193.

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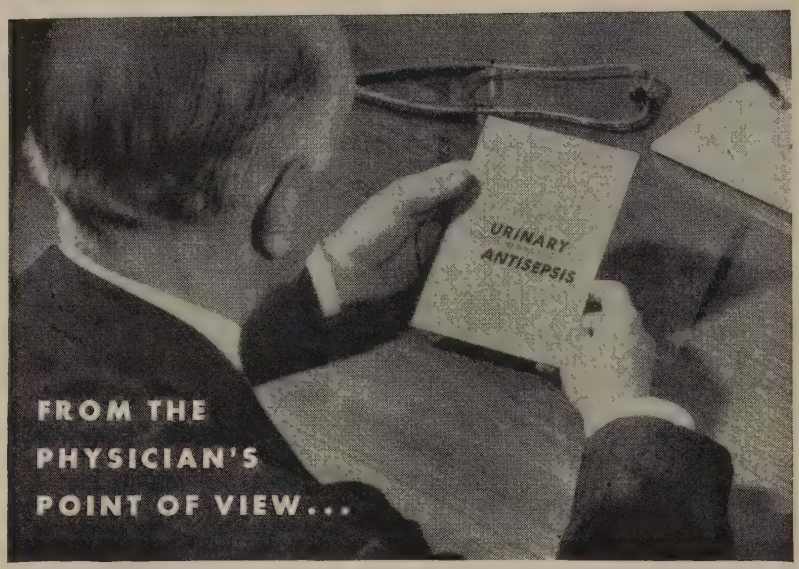

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The Microbiologist's Contribution to Medicine

At the mid-year meeting of the American Pharmaceutical Manufacturers' Association, held recently in New York, Dr. Selman Waksman, professor of microbiology at Rutgers University, said the successful treatment of many diseases had resulted from the "coordinated efforts of the biologist and chemist, the microbiologist, the physiologist and the clinician." The microbiologist, he said, contributed by isolating new microbes capable of forming nontoxic substances active against disease-producing organisms by developing methods for the optimum growth of these organisms and for measuring their antibacterial activities and by helping to elucidate the mode of action of antibiotics upon the disease-causing agents. The microbiologist, in collaboration with other biologists, is in a position to determine the potentialities of antibiotic substances as chemotherapeutic agents.

Childhood Tuberculosis

Dr. Hugh McCulloch (*Minn. Med.*, Dec. 1944) says that for many years childhood tuberculosis has been confused with first infection type of tuberculosis. While it is true that the course of tuberculosis is strongly modified by the age of first infection, the first attack is generally similar at any age, making due allowance for the type of tissue in which the lesion occurs. The relationship of this and other diseases, such as rheumatic fever and infantile paralysis to the growth process is of great pediatric importance.

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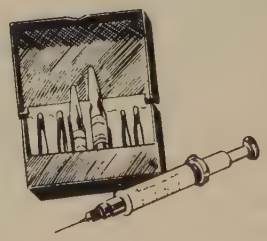

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Appendicitis in the Newborn

The occurrence of acute appendicitis in the very young is a rarity, and information on the subject is somewhat difficult to obtain, says *The Medical Journal of Australia* August 25, 1945. E. A. Maylard, of Glasgow, in 1920 made an analysis of the sex and age incidence in one thousand cases, and his findings were published in the *British Journal of Surgery*. The youngest patients in the series were four males between the ages of three and four years. In each case a Bacillus coli abscess was present; in two cases, stercoliths were present; in the third, the appendix was gangrenous, and in the fourth there was an ulcer that had perforated. The occurrence of a severe lesion in so young a subject is not surprising in view of the difficulty in diagnosis, if for no other reason.

W. Etherington-Wilson (*Proc. Royal Society of Medicine*) reports a case of acute appendicitis occurring in a male baby sixteen days old. He gives a short review of the literature and mentions a group of fifteen patients under four weeks of age, six of whom recovered and nine of whom died. The appendices of the six patients who recovered were in hernial sacs; the other nine were truly intra-abdominal. In his own case a diagnosis of peritonitis was made and the appendiceal lesion was discovered only on laparotomy. The child was desperately ill. The appendix was in a retrocecal position, the cecum was immobile, and diffuse peritonitis was present. The pelvis was drained and the wound was sutured. Temporary improvement took place as a result of compensation for the preoperative dehydration, but the patient died forty-eight hours after operation. Spinal anesthesia was used and proved satisfactory.

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(1) Tuohy, E. L.: Handbook of Nutrition, J.A.M.A., 1943, pp. 365-384. (2) Piersol, G. M., and Bortz, E.: Ann. Int. Med. 12:964, 1939.

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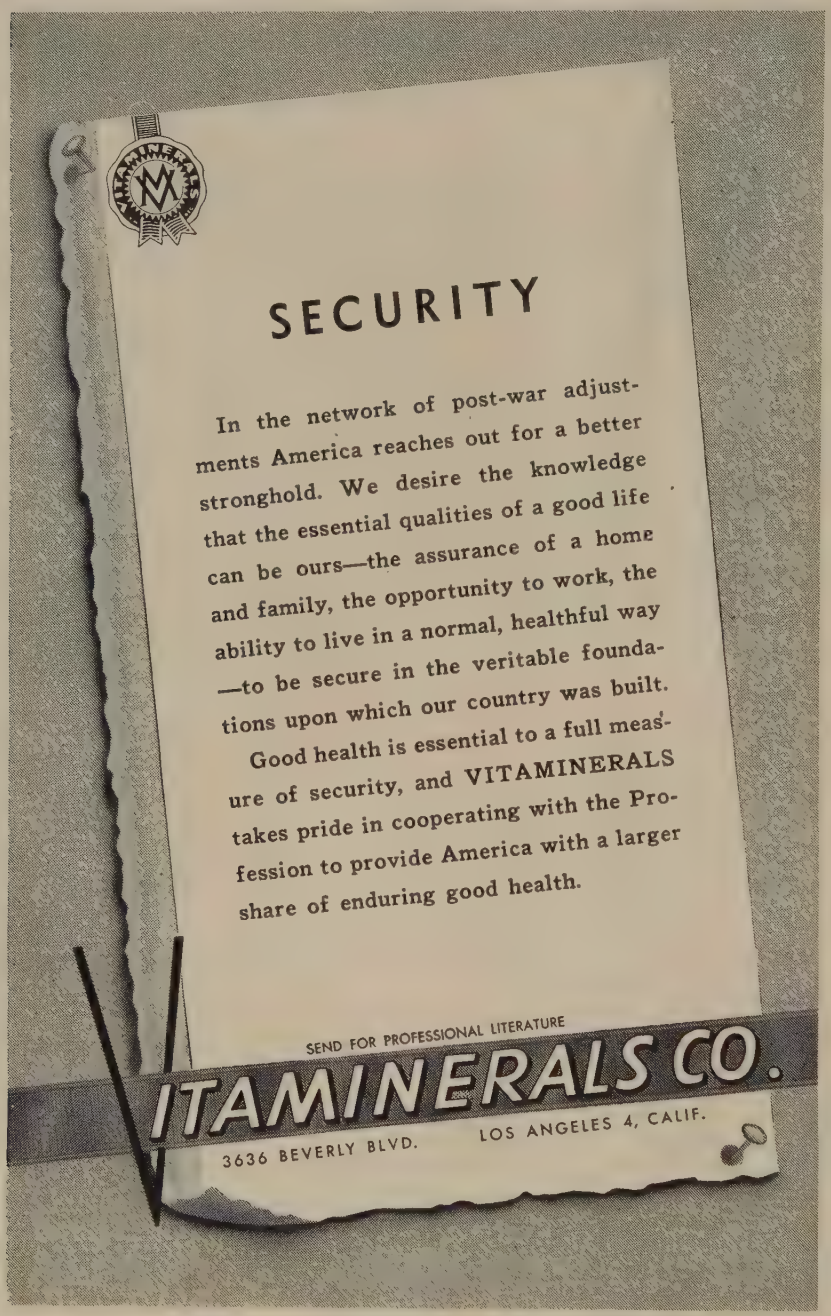
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Low Infant Mortality During the War

Infant mortality, continuing its long-term downward trend, reached record low levels during the war years, according to the *Statistical Bulletin* of the Metropolitan Life Insurance Company. In the white population of the United States, deaths among babies under one year of age dropped from 43.2 per 1,000 live births in 1940, to 37.5 per 1,000 in 1943, a decline of thirteen percent in three years; among the colored the improvement was slightly more—namely, fifteen percent. Because of the improvement in infant mortality, there were about 19,000 fewer deaths among children under one year of age in 1943 than there would have been if the death rate in 1940 had continued to prevail; infant deaths totaled about 118,500 in 1943, the latest year for which complete data are available.

The safeguarding of infant life during the war years was achieved in the face of many adverse conditions, such as overcrowded housing, disrupted family life, and depleted medical and nursing personnel. In large measure, the improvement in infant mortality was due to recent advances in medicine, particularly the widespread use of the sulfa drugs, the increased hospitalization of births, the Emergency Maternity and Infant Care program inaugurated by the Federal Government for families of men in the lower ranks of the armed services, and the generally higher standard of living for a large proportion of the population. The West South Central States experienced a more marked decline than any other geographic area, amounting, among white babies, to twenty-three percent between 1940 and 1943. In the East South Central States and in the Mountain States, the drop was about sixteen percent.

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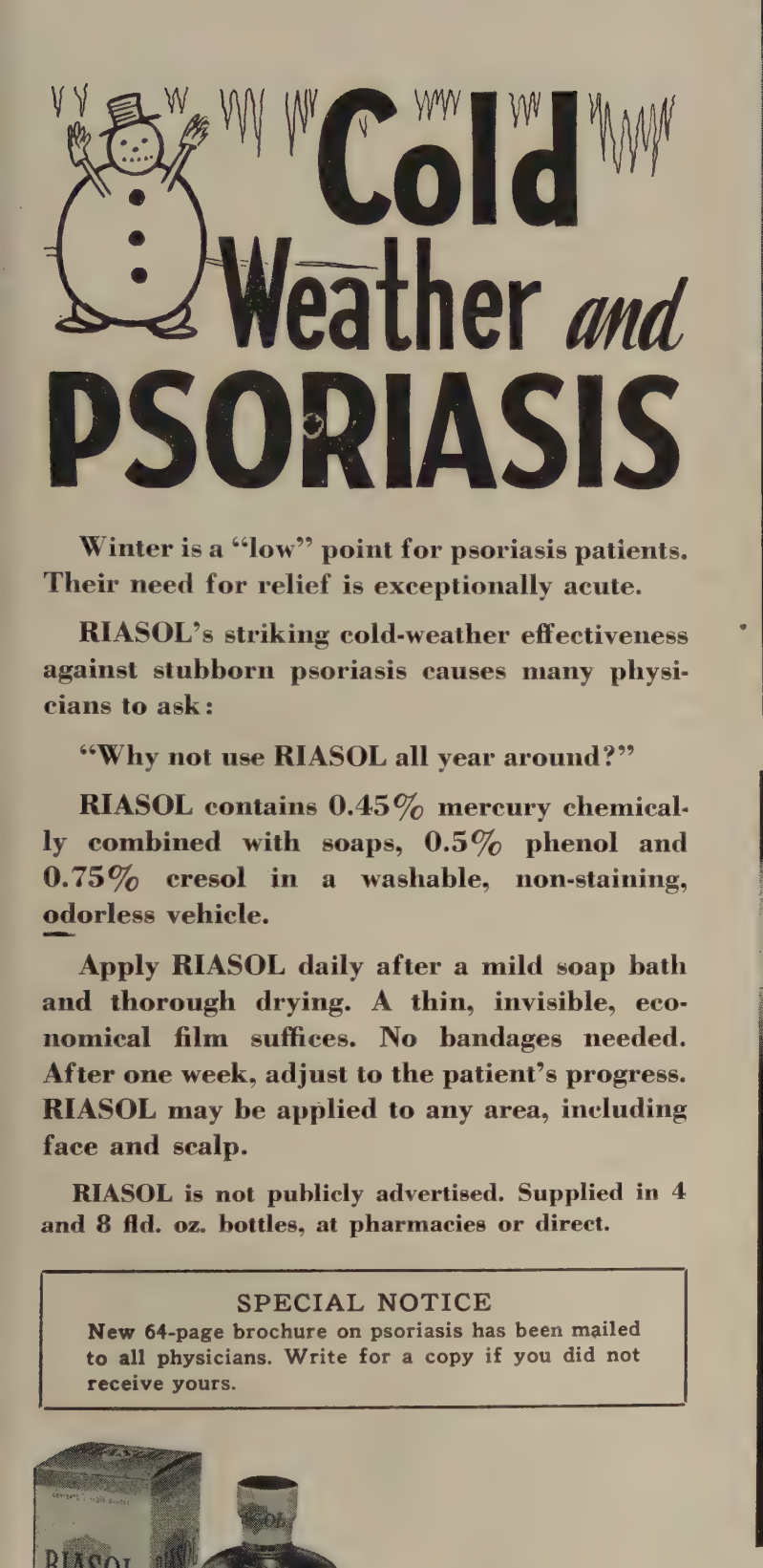

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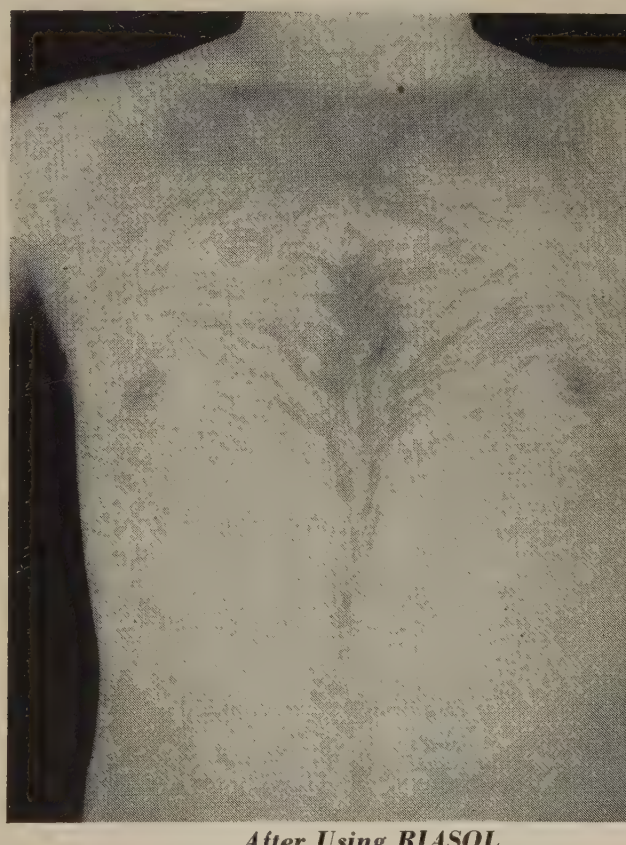

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Aminovite contains seventy percent protein hydrolysate "National," autolyzed yeast, ten percent; lactalbumin, ten percent; hi-ribo, two percent; liver powder (secondary fraction) two percent; gelatin, one percent; with flavoring and sweetening agents. Aminovite is designed to treat the same conditions as Aminonat, but it is to be used where the physician desires to administer natural vitamin B complex factors and minerals in addition to a high potency of amino acids. Aminovite, like Aminonat, may be taken in almost every beverage and cereal and the dosage is determined by the clinical condition being treated. Aminovite is supplied in four ounce, eight ounce and one pound packages.

Greater New York Hospital Association Endorses Pink Health Plan

A resolution endorsing the fifteen point plan for the establishment of health centers throughout New York State proposed by Louis H. Pink, president of the Associated Hospital Service of New York, was passed by the Greater New York Hospital Association, comprising representatives of 150 New York hospitals, at its regular monthly meeting held in New York on December 21st. The resolution was passed following a talk by Mr. Pink concerning the plan.

The hospital representatives described the plan as "a constructive step toward the solution of the complex problem of making better health available to everyone", and said they welcomed the concrete proposals advanced by Mr. Pink. "In proposing a closer tie between the hospital and the family doctor, and the cooperation of local civic officials with private health and welfare agencies in stimulating research, establishing needed hospital facilities, and expanding existing facilities for the enrichment of medicine and the better distribution of health care, he has shown how new frontiers can be opened up in the field of health under the existing pattern of legislation for the greatest good to the greatest number of individuals."

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Role of Mosses and Lichens in Medicine

Dr. William S. Finkensieper, in a paper presented at the semiannual meeting of the Scientific Section of The Proprietary Association of America, held in New York, December 5, 1945, said that mosses and lichens were among the most important to man of the various species of earth's plant life. Mosses growing on rocks, he said, were one of nature's ways of bringing about an abundance of available minerals.

The importance of mosses and lichens to the laboratory was pointed out by Dr. Finkensieper. Litmus, without which no laboratory is complete, is obtained from the lichen Rocella de candalle, and is manufactured in Holland by a fermentation process which requires four to five weeks to complete. "The ancient lore of lichens in medicine provides colorful history, and for the future should bear further investigation," he said. "Spotted lungwort (Slicata pulmonaria) was supposed to be a cure for all kinds of lung trouble due to its close resemblance in structure to the human lung. Old man's beard (Usnea barbeta) was used to promote the growth of hair because its growth on hemlocks was similar to an old man's beard."

The rôle of these minute plants as food was also cited. In Iceland, Lapland and northern Sweden, the high starch content in lichen has played an important part in the diet of animals and even men.

A New Hematinic

The National Drug Company, Philadelphia, manufacturers of pharmaceuticals, biologicals and biochemicals, has announced a new hematinic—Amiron. It contains protein hydrolysate "National," five percent; liver concentrate (1:20), five percent; liquid yeast, five percent; ethyl alcohol, ten percent; iron and ammonium citrates (green), four grains (equivalent to forty mg. of iron); thiamine hydrochloride (vitamin B_1), eight mg.; with carbohydrates and flavoring and sweetening agents. It is a palatable and potent liquid preparation containing the known and unknown B complex factors with amino acids added, thiamine hydrochloride and iron. As a dietary supplement, Amiron serves as a hematinic, stimulating the blood-making organs and supplying the essential factors in the production of hemoglobin and red blood cells. It is designed for use in secondary anemias, in the prevention and treatment of vitamin B_1 deficiencies, chronic and debilitating diseases and during pregnancy and lactation. It is administered orally in a dosage of one tablespoonful two or three times daily.

Amiron is supplied in four fluidounce, eight fluidounce, pint and gallon bottles.

Winthrop Announces Two New Products

Two new products have been added to the line of prescription items marketed by the Winthrop Chemical Company, Inc. They are Pyridoxine, Hydrochloride, Tablets and Solution, and Penicillin Eye Ointment made from batches of penicillin certified by the Food and Drug Administration. Tablets (25 mg.) of Pyridoxin Hydrochloride are sold in boxes of twenty-five, and the Solution, 10 cc. (50 mg. per cc.), is sold in boxes, each containing one vial. The Penicillin Eye Ointment is furnished in two strengths, namely, five hundred and one thousand units per gram, in one-eighth ounce tubes. Stocks of both products are available at all Winthrop shipping branches.

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for the Aged

Adequate strength can be maintained, and the manifestations of senescence can be postponed until ripe old age, if nutritional requirements are properly met. But to accomplish this aim with ordinarily eaten foods alone, frequently proves difficult.

As the years advance, certain foods are less easily digested. In many instances, organic and functional affections not only lessen the appetite, but also impair the powers of digestion and absorption. In consequence the aged usually impose diets upon themselves which perforce cannot meet the nutritional requirements.

Ovaltine, a delicious food drink, made with milk as directed, proves especially advantageous for the aged. It supplies virtually every essential nutrient in readily metabolized form: biologically adequate protein, readily utilized carbohydrate, well-emulsified fat, all the essential vitamins except vitamin C, and the important minerals. How readily three glassfuls of Ovaltine daily can bring the intake of essential food factors to optimal levels, is indicated by the analysis here shown.

Ovaltine is digested with remarkable ease. Its low curd tension makes for rapid gastric emptying. Its appealing taste is relished by the aged as well as by younger persons.

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Ovaltine

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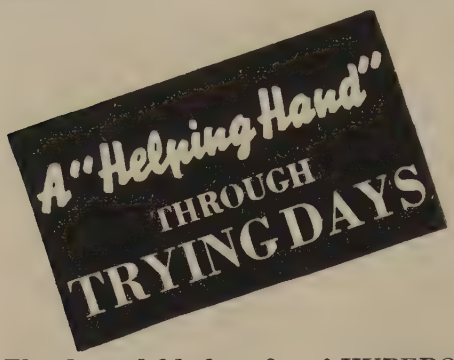
CARBOHYDRATE	62.43 Gm.	VITAMIN D	480 I.U.
FAT	29.34 Gm.	THIAMINE	1.296 mg.
CALCIUM	1.104 Gm.	RIBOFLAVIN	1.278 mg.
PHOSPHORUS	.903 Gm.	NIACIN	7.0 mg.
IRON	11.94 mg.	COPPER	.5 mg.

*Based on average reported values for milk.



The dependable benefits of HYPEROL in helping to control certain periodic functional utero-ovarian irregularities are especially useful during these days of stress. HYPEROL aids in relieving pain, reducing congestion, and improving general well being where hematinic effects are required, enabling most women to continue in their normal activities.

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A New Form of Thyroid Medication

A new and unusual form of thyroid medication, brominated thyroid, has been developed by the Van Patten Pharmaceutical Company of Chicago. Thyrobrom is the name of the new product, for which several advantages over thyroid, U.S.P., have been claimed.

Thyrobrom provides the physiological actions of thyroid, U.S.P., but clinical tests have indicated that the thyrotoxic effects of plain thyroid are minimized. Such symptoms as palpitation and nervousness, which often follow the use of plain thyroid, occurred less frequently when Thyrobrom was substituted for thyroid, U.S.P., in a recent series of sixty cases (MED. REC., 158:420, 1945).

Each Thyrobrom tablet contains two grains of brominated thyroid. Iodine content equals the U.S.P. standard for thyroid.

The use of this new product is suggested in hypothyroid obesity and other conditions in which thyroid, U.S.P., is employed, particularly if plain thyroid is not well tolerated.

Thyrobrom is strictly limited to prescription use and is packaged in bottles of thirty grooved tablets. The Van Patten Pharmaceutical Company offers samples and complete literature. Address 500 North Dearborn Street, Chicago 10, Illinois.

Safer Medication with Sulfonamides

The dangers of toxic reactions to the kidneys and crystal formation in the urine, frequently seen when sulfathiazole or sulfadiazine is administered, has been greatly reduced by the application of a recently discovered phenomenon that the total toxic and crystallizing properties of a combination of two sulfonamides would be no greater than the toxic and crystallizing properties of one of them in the combination. Proved by clinical trial, this means that the incidence of kidney toxicity and urine crystal formation with a combination of sulfathiazole and sulfadiazine would be very much less than if an equivalent amount of sulfathiazole or sulfadiazine were administered singularly. At the same time, the clinical therapeutic results in all conditions ameliorable to sulfadiazine or sulfathiazole therapy is often higher with the combination.

Combinations of sulfathiazole and sulfadiazine, known as Combisul-TD, are now produced by the Schering Corporation of Bloomfield, N.J. For the safer treatment of meningitis, Combisul-DM, a combination of sulfadiazine and sulfamerazine is likewise available.

Progress of Hormone Therapy

Dr. George W. Thorn, Hersey professor of the theory and practice of physic, Harvard Medical School, in a paper presented at the recent midyear meeting of the American Pharmaceutical Manufacturers' Association, said that seven hormones secreted by the gastrointestinal tract had now been isolated and that these substances exerted a profound effect on the secretion of the stomach, pancreas, and small intestine and upon the activity of the gallbladder. He concluded that, although extensive clinical application had not been tried, considerable thought should be given to the possibility of improving disturbances in gastrointestinal function by replacing appropriate hormones.

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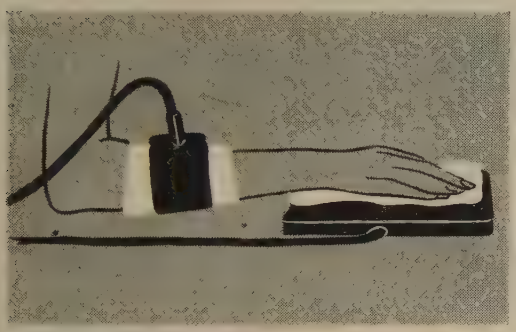

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Fellowships in Medical Research

Acting as agent for various national societies, the National Research Council has offered additional fellowships to newly separated Medical Department officers holding M.D. or Ph.D. degrees. These fellowships are in the fields of cancer and anesthesiology. Funds for the former are being provided by the American Cancer Society and administered by the National Research Council's newly appointed Committee on Growth. Fellowship stipends vary from $2,000 to $3,000 per year. They are intended, as a rule, for those who are under thirty-four years of age. Although these fellowships are for a period of one year, they may be renewed. A limited number of senior fellowships for older, particularly qualified individuals planning to specialize in cancer research are available for three-year periods with stipends of $3,000 to $6,000 per annum. Fellowships in anesthesiology, supported by the American Society of Anesthesiologists, are offered in addition to those in filtrable viruses, orthopedic surgery, and medical sciences.

Poliomyelitis in New Jersey

The National Foundation for Infantile Paralysis and its New Jersey Chapters spent $321,111.67 to care for poliomyelitis patients in that State during 1945, according to Mr. Charles M. Jones, State "March of Dimes" chairman. New Jersey suffered during 1945 the second worst epidemic in its history, with 959 cases reported. The National Foundation forwarded $52,500.00 to underwrite the salary of nurses through the New Jersey Crippled Children Commission, and in addition, local Chapters expended $268,611.67 for hospitalization, special equipment, transportation of patients, and medical and nursing services.

In all, around $6,500,000 was spent by the National Foundation and its chapters throughout the country. Of this approximately $5,000,000 was spent by chapters and the balance of approximately $1,500,000 was given out in emergency epidemic aid by the National Foundation. Not only must treatment and care be assured for victims of current and recent epidemics, but also for patients carried over from previous years.

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Half a century of empirical success with Neurosine was corroborated by the E. K. G. tracings, not one of which indicated any cardiotoxic effects.

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Sugar Research Awards

An advisory committee including Charles F. Kettering, president of the American Association for the Advancement of Science, and Dr. Carl S. Marvel, president of the American Chemical Society, has been named by the National Science Fund of the National Academy of Sciences to assist in the selection of recipients of awards to stimulate research in the use of sugar. The Sugar Research Foundation, Inc., is sponsoring the contest.

Announcement of the Advisory Committee comprising outstanding scientists was made by the Foundation coincident with publication of a booklet outlining the history and rules for the prize awards totalling $45,000.00. Research grants of the Foundation, which total $415,875 to date, were also listed. The prize awards will be made annually and will be climaxed by a $25,000 grand award in 1950 for which all recipients of annual awards may qualify.

In addition to Mr. Kettering and Dr. Marvel, professor of organic chemistry at the University of Illinois, other members of the Advisory Committee are: Dr. A. Baird Hastings, Hamilton Kuhn professor of biochemistry at Harvard University; Dr. Edmund W. Sinnot, Sterling professor of botany at Yale University; Dr. William C. Stadie, John Herr Musser professor of research medicine at the University of Pennsylvania, and Dr. Vincent du Vigneaud, professor of biochemistry at Cornell University Medical College.

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THE PAINLESS KNIFE (New and Novel) *by Roper.* $3.50.

SULFONAMIDE THERAPY IN MEDICAL PRACTICE (New), *by F. D. Smith, M.D.* Exact dosage and toxic reactions of all the Sulfos and Penicillin. Illustrated. $5.00.

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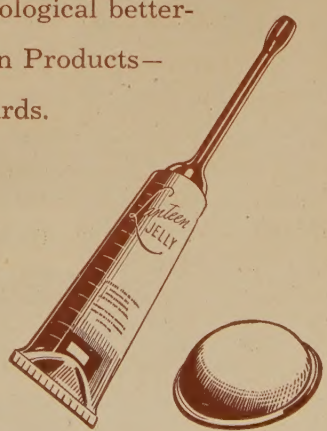

L A N T E E N

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Let your HEAD take you

(The average American today has a choice of just going where "his feet take him", or choosing wisely the course to follow. Let's skip ahead 10 years, and take a look at John Jones—and listen to him . . .)

"SOMETIMES I feel so good it almost scares me.

"This house—I wouldn't swap a shingle off its roof for any other house on earth. This little valley, with the pond down in the hollow at the back, is the spot I like best in all the world.

"And they're mine. I own 'em. Nobody can take 'em away from me.

"I've got a little money coming in, regularly. Not much—but enough. And I tell you, when you can go to bed every night with nothing on your mind except the fun you're going to have tomorrow—that's as near Heaven as man gets on this earth!

"It wasn't always so.

"Back in '46—that was right after the war and sometimes the going wasn't too easy—I needed cash. Taxes were tough, and then Ellen got sick. Like almost everybody else, I was buying Bonds through the Payroll Plan—and I figured on cashing some of them in. But sick as she was, it was Ellen who talked me out of it.

" 'Don't do it, John!' she said. 'Please don't! For the first time in our lives, we're really saving money. It's wonderful to know that every single payday we have more money put aside! John, if we can only keep up this saving, think what it can mean! Maybe someday you won't have to work. Maybe we can own a home. And oh, how good it would feel to know that we need never worry about money when we're old!'

"Well, even after she got better, I stayed away from the weekly poker game—quit dropping a little cash at the hot spots now and then—gave up some of the things a man feels he has a right to. We didn't have as much fun for a while but we paid our taxes and the doctor and—we didn't touch the Bonds.

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